An aerial photograph of an airbase. In the foreground, a B-2 Spirit stealth bomber is flying low over a green field. In the background, several F-35 fighter jets are visible on the tarmac and in flight. The airbase buildings and runways are visible in the middle ground.

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MOVING PIECES

NEAR-TERM CHANGES
TO PACIFIC AIR POSTURE

CARL REHBERG
JOSH CHANG

MOVING PIECES: NEAR-TERM CHANGES TO PACIFIC AIR POSTURE

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2022

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ACKNOWLEDGMENTS

The authors would like to thank Thomas G. Mahnken, Evan Montgomery, Bill Bodie, Chris Bassler, Michael Thadani and other reviewers for their excellent comments and advice on this monograph. Special thanks to James Mersol for his outstanding publication support. The opinions and analysis in this study are those of the authors; any shortcomings are solely the responsibility of the authors. CSBA receives funding from a broad and diverse group of funders, including private foundations, government agencies, and corporations. A complete list of these organizations can be found on CSBA's website at www.csbaonline.org/about/contributors.

Cover Graphic: Andersen Air Force Base, Guam – F-15E Strike Eagles and a B-2 Spirit bomber fly in formation over the base. U.S. Air Force photo by Tech. Sgt. Cecilio Ricardo.

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Executive Summary

Changes to U.S. global military force posture tend to be incremental and slow, with much of the force posture in the Indo-Pacific, especially for the United States Air Force (USAF), remaining essentially unchanged since the end of the Cold War. Today, however, the United States (U.S.) and its allies face an increasingly challenging threat environment from China's military buildup in the region and its long-range precision strike capabilities. The posture of the U.S. air forces in the Indo-Pacific has failed to keep pace with the rise of Chinese military power and aggressiveness.

The current posture of U.S. Indo-Pacific air forces is not well aligned for strategic and operational effectiveness against the People's Liberation Army (PLA). Current air force posture is vulnerable to adversary first strike due to insufficient posture resiliency—that is, the ability of deployed forces to survive, operate, and regenerate under adversary attack. Force posture involves the right force structure at the right location. In contrast, posture resiliency is a mix of active defenses such as integrated air and missile defense (IAMD) and passive defenses, which include dispersal capabilities such as Agile Combat Employment (ACE), hardened infrastructure including shelters, and other capabilities. This report argues that although posture resiliency must constitute the right mix of passive and active defenses, it also requires more emphasis on an understudied element to enhance the survivability of force posture in U.S. Indo-Pacific Command (INDOPACOM): force structure capabilities for counterstrike.¹

1 Counterstrike can be defined as operations to eliminate both an opponent's offensive capabilities and the infrastructure supporting those forces following an adversary's first strike. This concept is rooted in the context of Japan's Self-Defense Forces (JSDF) as Tokyo considers the capabilities it would need and relevant rules of engagement to be able to attack targets such as missile launch sites, airbases, and command centers following a Chinese or North Korean strike on Japanese territory. This study adapts this concept to explain how U.S. air forces could generate resilient, survivable force posture and bases in the Indo-Pacific. For more information about the counterstrike debate in Japan and the concept's tenets, see Masuda Tsuyoshi, "Japan's LDP Calls for Stronger 'Counterstrike Capabilities,'" *NHK World-Japan*, May 11, 2022, <https://www3.nhk.or.jp/nhkworld/en/news/backstories/1986/>

U.S. policymakers have largely assumed that U.S. installations throughout the Indo-Pacific region would have to absorb damage from repeated salvos of PLA long-range precision strikes while deploying and fielding forces as best as possible. Other Service approaches, such as the USAF's ACE and the Department of the Navy's Distributed Maritime Operations (DMO) assume sufficient warning to enable dispersal. This report emphasizes that additional consideration of counterstrike capabilities, a subset of power projection, alters the posture resiliency paradigm by using rapid response air forces capabilities such as bombers and multi-role fighters to conduct retaliatory strikes in the form of defensive and offensive counter-air operations (DCA and OCA) against various PLA "archers" and their bases—thus responding against the PLA hubs and platforms that threaten U.S. and allied bases.

Although U.S. basing and presence across the Indo-Pacific region are extensive, the options presented in this study concentrate on the primary hubs along the First and Second Island Chains, Okinawa and Guam, respectively. The report offers options that the Department of Defense (DoD), INDOPACOM, and the respective services should consider in the near-term, through the end of the 2020s decade. Additional recommendations, which also support force structure, are also provided in this study. New force structure elements, such as the B-21 and 6th generation fighters, are currently anticipated to be added into the air forces in operationally relevant numbers beginning in the 2030s. Considerations for those systems are beyond the time horizon of this study but are crucial factors to consider as part of longer-term force posture change considerations in the Indo-Pacific.

Posture Options for Okinawa. Okinawa is one of the most vulnerable hubs, due to its close proximity to large volumes of missiles and munitions from the PLA. The main focus of the Okinawa initiatives is a dramatic increase in power projection and counterstrike capabilities, along with accompanying enhancements to ISR, maritime surveillance, and early-warning to defend against multi-axis attacks. These options would achieve a net footprint reduction, and also dramatically alter the composition of the air forces at this key hub. Okinawa would need still need enhanced active and passive defenses, but with the recommended posture changes, the associated demands for defenses would be much less than what is needed with the current posture.

The new force structure options would reduce the overall cost of posture resiliency and be a much more potent and resilient operational force against the PLA. Currently deployed legacy F-15C/D aircraft should be replaced with F-15EX, along with attritable aircraft and air-launched hypersonic weapons. These F-15EXs should also be put on strip alert and equipped with the latest munitions and partner unmanned aerial systems (UAS). USAF and the United States Marine Corps (USMC) should establish MQ-9 capacity based out of Okinawa, which would provide critical capability and capacity for tasking in cruise missile defense, Airborne Early Warning, maritime surveillance/sanitization, and ISR support. In addition, USAF and USMC runway-independent, Low-Cost Attritable Aircraft Technology (LCAAT) aircraft of several different classes could be dispersed throughout Okinawa

and surrounding smaller islands, to provide a more numerous, low-cost and responsive counterstrike force against maritime and coastal PLA targets.

Posture Options for Guam. Guam is a key hub for U.S. air forces along the second island chain. The main focus of the Guam initiatives would include a dramatic increase in long-range power projection and counterstrike capabilities, along with a more defensible hub for sortie generation and munitions stores. Changes in force posture would consist of a permanent bomber detachment or squadron at Andersen Air Force Base (AAFB), which should be bolstered by robust posture resilience measures. A bomber detachment would stand up as rapidly as possible, with B-52s, B-1Bs, or a combination that could be placed on strip alert, along with their needed munition load-outs and 12 F-15EX aircraft. The bombers would be focused on operations today, while preparing and enabling the transition to B-21s, next-generation air dominance (NGAD) platforms, and supporting enablers over the next decade. Along with the addition of those advanced air platforms, new-design hardened facilities on the North Ramp must also be prioritized. Although there are currently plans to base a detachment of Republic of Singapore Air Force (RSAF) fighters on the North Ramp, this unit should be relocated to a different location within AAFB or somewhere else in the Pacific altogether.

The current rotational Reserve Component (RC) Tanker Task Force (TTF) at Guam should be replaced with a permanent 12-18 KC-46As, KC-135Rs, or a mixed squadron to enhance operational reach and flexibility critical for power projection and counterstrike operations. The USAF and USMC should establish MQ-9 capacity (and associated logistics hubs on the island) for tasking, similar to Okinawa, as soon as possible. With the right payloads, the MQ-9s can provide the most operationally and cost-effective capability in the near-term for cruise missile defense, AEW, maritime surveillance/sanitization, and ISR support. The USAF and USMC would provide logistics support and a staging base for their respective LCAAT, class 4 UAS, and class 2/3 UAS in the theater. In addition, more Navy P-8s should be postured in Guam to ensure effective ASW and undersea superiority in Guam's defense and extending further across the region.

Washington has failed to keep pace with the rise of Chinese military power and aggressiveness, which remains evident in the current posture of the Pacific air force. The options highlighted in this report would significantly increase posture resiliency for U.S. air forces and enhance power projection and counterstrike credibility, which has been hampered by entrenched, inertial DoD and service bureaucratic intransigence and pathologies. Other important non-force structure options/recommendations are also presented in the conclusion, which include calls for increased focus on combat operations, including the establishment of two permanent combined joint task forces (PCTJFs), an outside the continental U.S. (OCONUS) base realignment and closure (BRAC) effort, and OCONUS military construction (MILCON) reforms, along with enhanced passive and active defenses.

Introduction

In November 2021, the Biden administration announced the completion of the Global Posture Review (GPR), which evaluated the makeup and distribution of U.S. forces worldwide and issued recommendations on adjusting both.² The 2021 GPR outlined posture changes such as infrastructure investments in Australia and the Pacific Islands, the removal of a 25,000 personnel cap in Germany, and the continuation of partner capacity-building initiatives in the Middle East and Africa.³

Analysts within the defense community, however, largely deemed the recent GPR as a missed opportunity for the United States to enhance its military posture in key theaters of strategic competition, chiefly the priority theater of the Indo-Pacific.⁴ Critics labeled the posture changes specified in the 2021 GPR as marginal and perceived the overall review as maintenance of continuity rather than a meaningful effort to truly shepherd essential resources or tailor force mixes for strategically important regions.⁵ Analysts have also discussed ways to improve U.S. force posture in the Indo-Pacific in the wake of the recent GPR, ranging from efforts to better protect defense infrastructure in the region to

2 Jim Garamone, “Biden Approves Global Posture Review Recommendations,” *U.S. Department of Defense*, November 29, 2021, <https://www.defense.gov/News/News-Stories/Article/Article/2856053/biden-approves-global-posture-review-recommendations/#:~:text=The%20Global%20Posture%20Review%20has,with%20his%20national%20security%20guidance>.

3 “DoD Concludes 2021 Global Posture Review,” *U.S. Department of Defense*, November 29, 2021, <https://www.defense.gov/News/Releases/Release/Article/2855801/dod-concludes-2021-global-posture-review/>

4 Jim Garamone, “Defense Official Says Indo-Pacific Is the Priority Theater; China Is DOD’s Pacing Challenge,” *U.S. Department of Defense*, March 9, 2022, <https://www.defense.gov/News/News-Stories/Article/Article/2961183/defense-official-says-indo-pacific-is-the-priority-theater-china-is-dods-pacing/>

5 For examples of commentary critical of the 2021 Global Posture Review, see Dov S. Zakheim, “A Disappointing Global Posture Review from Defense,” *The Hill*, December 3, 2021, <https://thehill.com/opinion/national-security/583947-a-disappointing-global-posture-review-from-defense>; Becca Wasser, “The Unmet Promise of the Global Posture Review,” *War on the Rocks*, December 30, 2021, <https://warontherocks.com/2021/12/the-unmet-promise-of-the-global-posture-review/>;

streamlining the organizational and bureaucratic processes for promoting posture reforms.⁶ The significant amount of commentary stemming from the 2021 GPR indicates that force posture is a key, but still unsettled, element of consideration in the ongoing strategic competition with the Chinese Communist Party (CCP) and People’s Liberation Army (PLA). Furthermore, the United States Air Force’s (USAF) decision to remove forward-deployed F-15C squadrons from Kadena Air Base in Okinawa and replace them with rotational units has sparked debate about how to best calibrate U.S. force posture in INDOPACOM.⁷ There is, however, a greater need to further define and explain the elements that comprise posture and how it can be improved and protected, especially during the “danger zone” period of the “Decade of Maximum Danger,” the 2020s.⁸

What is Posture and Why Does it Matter?

This study defines force posture as a state’s available military capabilities and the locations where they are based, the specific actions or operations they conduct in both peacetime and conflict, the infrastructure to support these operations, and the stated policies of how any of these components will be organized, arranged, and employed.⁹ Force posture is especially significant in the context of near-peer competition. Although the United States maintains a wide array of interests and security commitments globally, it must satisfy them to the greatest extent possible with limited resources and capabilities. Posture effectively acts as a roadmap that outlines where and what Washington commits, thereby highlighting areas of importance in its broader strategy and sending signals of prioritization to adversaries and allies alike. The capabilities and forces deployed in a specific region will also be the ones that will be the most immediately available to deter and, if necessary, deny or defeat adversaries if a crisis or conflict ensues in that given area. Adversaries can also exploit gaps within U.S. force posture to confidently carry out aggressive actions in contested theaters and challenge overextended or underequipped U.S. forces.

6 Stacie L. Pettyjohn, “Spiking the Problem: Developing a Resilient Posture in the Indo-Pacific with Passive Defenses,” *War on the Rocks*, January 10, 2022, <https://warontherocks.com/2022/01/spiking-the-problem-developing-a-resilient-posture-in-the-indo-pacific-with-passive-defenses/>; Dustin Walker, “The Pentagon is in Desperate Need of an Intervention from the Top,” *War on the Rocks*, January 27, 2022, <https://warontherocks.com/2022/01/the-pentagon-is-in-desperate-need-of-an-intervention-from-the-top/>

7 Demetri Sevastopulo, “US to Withdraw Permanent F-15 Fighter Force from Okinawa,” *Financial Times*, October 28, 2022, <https://www.ft.com/content/271c0c93-eae0-4835-a9f9-882a1doeb3b5>

8 Hal Brands and Michael Beckley, *Danger Zone: The Coming Conflict with China*, New York: W.W. Norton & Company, 2022. For more information about this “Maximum Danger” concept, see Gabriel Collins and Andrew S. Erickson, *U.S.-China Competition Enters the Decade of Maximum Danger: Policy Ideas to Avoid Losing the 2020s* (Houston, TX: Rice University Baker Institute for Public Policy, 2021), http://www.andrewerickson.com/wp-content/uploads/2021/12/US-China-Competition-Enters-Decade-of-Max-Danger-Policy-Ideas-to-Avoid-Losing-2020s_Collins-Erickson_Rice-University-Baker-Institute_20211220.pdf

9 M. Elaine Bunn, “Force Posture and Dissuasion,” *Strategic Insights* 3, no. 10 (October 2004), <https://calhoun.nps.edu/bitstream/handle/10945/11126/11126.pdf?sequence=1&isAllowed=y>

Posture Resilience and Its Importance

Although force posture involves discussions about the placement of different units and capabilities, such considerations are only one step in a multi-phase process. Once the United States deploys specific forces to a given region, it must find ways to protect them in order to ensure their effectiveness later on during a crisis or conflict. This aspect, encapsulated in a term coined by the 2018 National Defense Strategy (NDS), is known as posture resiliency. The 2018 NDS describes posture resiliency as “forces that can deploy, survive, operate, maneuver, and regenerate in all domains while under attack.”¹⁰ A focus on posture resiliency has been largely absent even as U.S. adversaries increase their capacity and capability to hold U.S. forces at risk. The PLA could attempt to strike U.S. bases and forces across the Indo-Pacific to hinder U.S. efforts to intervene against Chinese military action in the region, such as an operation to blockade or seize Taiwan.¹¹ The U.S. DoD and the armed services have done little to reduce the ever-increasing Chinese incentives for preemption, escalation, and a successful fait accompli. This lack of focus on posture resilience is especially concerning for air forces in the Indo-Pacific region.

In practical terms, decision makers must not only define the elements of resiliency, but also assess the ways in which these components would interact to increase the survivability of U.S. forces operating within the First and Second Island Chains. Posture resiliency consists of three key areas: (1) active defenses, (2) passive defenses, and (3) counterstrike.¹² Active defense refers to assets that directly target and eliminate incoming threats, most notably IAMD capabilities, such as terminal high-altitude area defense (THAAD) and Patriot (PAC-3) surface-to-air missiles and associated equipment (e.g., radars, fire-control, and

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- 10 U.S. Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America*, 2018, p. 6, <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf> Prior to the 2018 NDS, DoD officially mentioned resiliency as early as the 2010 QDR when it identified the need to increase the resiliency of its theater bases to counter emerging air and missile threats. While the 2010 QDR talked about the resiliency of theater bases—it did not go into specifics. DoD’s 2010 Quadrennial Defense Review report to Congress, Department of Defense, *Quadrennial Defense Review* (Washington, DC: DoD, 2010), p. ix, https://dod.defense.gov/Portals/1/features/defenseReviews/QDR/QDR_as_of_29JAN10_1600.pdf. In the 2014 QDR, DoD was more direct with the importance of resiliency by stating: “The Department will also improve the resilience of air, naval, ground, space, and missile-defense capabilities, even in the face of large-scale, coordinated attacks. We will pursue a number of complementary measures that, in combination, will reduce the vulnerability of U.S. forces and allow them to sustain high-tempo operations. This includes active and passive measures to enhance the resilience of overseas bases.” Department of Defense, *Quadrennial Defense Review* (Washington, DC: DoD, 2014), p. 38, https://dod.defense.gov/Portals/1/features/defenseReviews/QDR/2014_Quadrennial_Defense_Review.pdfsofsoft Word - 2014 QDR_20140304_at 0720.docx (defense.gov)
- 11 For an example of analysis highlighting PLA efforts to preemptively strike U.S. bases in an attempt to invade Taiwan, see Stacie Pettyjohn, Becca Wasser, and Chris Dougherty, *Dangerous Straits: Wargaming a Future Conflict Over Taiwan*, Washington, DC: Center for a New American Security, 2022, <https://s3.amazonaws.com/files.cnas.org/CNAS+Report+Dangerous+Straits-Defense-Jun+2022-FINAL-print.pdf>
- 12 Counterstrike in this document is used as an overarching term to describe JP 3-01 Counterair Framework regarding attack operations to support IAMD under offensive counterair (OCA) and some aspects of defensive counterair (DCA). The new JP 3-01 also expands IAMD Approach by adding in Global Strike into the mix outside of offensive counterair (OCA).

battle management, command-and-control (BMC2)). Passive defense refers to hardened infrastructure and dispersal of assets through concepts of operation (CONOPS) such as Agile Combat Employment (ACE).¹³ ACE doctrine states, “Forces must be able to rapidly execute operations from various locations.”¹⁴ These passive defense actions minimize damage to installations from kinetic threats by absorbing strikes and forcing the adversary to expend more munitions on hardened targets and those spread out across a wider area.¹⁵ Counterstrike considers the ability of military units to conduct retaliatory actions against enemy forces in response to initial adversary strikes and to prevent or mitigate damage from additional follow-on attacks.

A New Framework for Posture Resilience

Much of the discussion on resilience has highlighted the role of active and passive defenses, but there has been a remarkable lack of discussion on posture resiliency’s relationship with the protected forces’ ability to carry out counterstrike operations. The current framework largely assumes that active and passive defenses would bear the brunt of the force protection effort to maintain the integrity of bases. This assumption, however, expects these installations to absorb damage and sustain operations as best as they can under continuous strikes. A renewed resilience framework would incorporate counterstrike air forces conducting offensive counter-air (OCA) and Defensive Counter Air (DCA) combat air patrols (CAPs) to directly target adversary assets enabling strikes on U.S. bases. OCA would target adversary missile launch sites, airfields, command-and-control (C2) nodes, and other infrastructure, while DCA CAPs would eliminate enemy bombers and tactical airpower before they launch munitions (e.g., cruise missiles) that could threaten U.S. and allied installations.¹⁶ Under this new framework, including counterstrike alongside active and passive defenses would enable a more robust damage limitation approach in which U.S forces can impose reciprocal costs upon the adversary, rather than absorbing them unilaterally. This counterstrike approach protects the bases

13 Agile Combat Employment (ACE) is “a proactive and reactive operational scheme of maneuver executed within threat timelines to increase survivability while generating combat power throughout the integrated deterrence continuum.” United States Air Force, *Air Force Doctrine Note 1-21. Agile Combat Employment*, December 1, 2021, p. 1, https://www.dctrine.af.mil/Portals/61/documents/AFDN_1-21/AFDN%201-21%20ACE.pdf. “ACE consists of 5 major core elements: posture, C2, movement and maneuver, protection, and sustainment” p. 1.

14 United States Air Force, *Air Force Doctrine Note 1-21. Agile Combat Employment*, December 1, 2021, p. 5, https://www.dctrine.af.mil/Portals/61/documents/AFDN_1-21/AFDN%201-21%20ACE.pdf.

15 “These measures include detection, warning, camouflage, concealment, deception, dispersion, hardening, and the use of protective construction.” There are additional passive defenses that include a wide range of other capabilities. See Joint Chiefs of Staff, “Joint Publication 3-01: Countering Air and Missile Threats,” April 21, 2017, pp. I-4 to I-12, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_01.pdf.

16 Defensive Counter Air (DCA) writ large is a term for all active and passive air and missile defenses. DCA combat air patrols (CAPs) can eliminate the “archers” before they launch their multiple munitions. For example, eliminating an H-6 bomber prior to the launch of CMs could multiple interceptors to take the CMs out individually. See Joint Chiefs of Staff, “Joint Publication 3-01: Countering Air and Missile Threats,” April 21, 2017, Chapter 5 at https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_01.pdf.

hosting U.S. forces and ensures that these installations can continue to support other follow-on operations, including sustaining logistics that enable the U.S. to maintain and project power in the Western Pacific.

DoD has frequently advocated a robust, flexible force posture that changes in accordance with shifts in the threat landscape.¹⁷ Those changes require an adjustment in posture resiliency that bases more counterstrike capabilities at or near key U.S. bases in the Indo-Pacific, as the United States cannot depend on forces from outside the area of responsibility (AOR) to quickly arrive uncontested in the event of a crisis or contingency. The U.S. possesses significant counterstrike capabilities, but very little force posture committed to those missions is situated within the INDOPACOM AOR. Most power projection and counterstrike platforms lie outside of INDOPACOM and require time to deploy to the theater, given the lack of permanent posture and presence. With the threat of China's long-range precision strike capabilities, there is no path to cost-effective IAMD without the capability to degrade the air, maritime, and ground platforms that comprise China's capabilities. DoD should continue to invest in an overarching strategy that informs force posture, which in turn helps dictate an appropriate mix of passive defense, active defenses, and counterstrike capabilities with the needed logistics that can be sustained in contested environments.

The Importance of Guam and Okinawa- Key Hubs on the First and Second Island Chains

Okinawa and Guam are locations with major installations that host a substantial portion of U.S. capabilities and forces in the Indo-Pacific for peacetime, crisis, and conflict. These two areas play key geographic roles in U.S. defense strategy and represent strong case studies to examine force posture resiliency. The debate within the defense community about the level of effort required to enhance resiliency in these two locations raises questions as to whether one area warrants more resiliency investments than the other.

17 U.S. Department of Defense, *Quadrennial Defense Review Report* (February 2010), https://history.defense.gov/Portals/70/Documents/quadrennial/QDR2010.pdf?ver=vVJYRVwNdnGb_ooixFoUfQ%3d%3d. It is important to note that the 2001 QDR first mentioned China as a future threat. In the 2010 QDR, a mandate to all the services was given: "Increase the resiliency of U.S. forward posture and base infrastructure." (p. ix)

Geographic factors highlight several operational tradeoffs between Guam and Okinawa. Okinawa is closer to potential geopolitical flashpoints in or near the First Island Chain, enabling forces based on the island to reach crisis areas quickly. However, this proximity also provides strike advantages to the PLA, putting Okinawa-based forces within range of China's military. Guam's location in the Second Island Chain places U.S. assets farther away from PLA strikes. Nevertheless, this distance does not make Guam immune to salvos of long-range PLA ballistic missiles and cruise missiles¹⁸. Longer distances also reduce the ability to project power as forces based in Guam take longer to transit to a crisis area and would require aerial refueling and other logistical support.

Both Guam and Okinawa are vital on their own and mutually support one another.¹⁹ There are compelling political, operational, and logistical rationales for enhancing resilience in both locations. Guam is a U.S. territory, and Okinawa is part of Japan, a close ally. The U.S. has concentrated a substantial amount of materiel, resources, platforms, and capabilities in both locations. Therefore, adversary strikes on either location would constitute direct aggressive actions against the U.S. and its allies and compromise Washington's ability to sustain combat operations and project military presence or power during crises.

In light of the greater focus on distributed lethality and expeditionary advanced base operations, there is a need for smaller nodes that could be tethered to main operating bases (MOBs) or hubs such as Okinawa and Guam. These more significant hubs "feed" the smaller nodes with materials and supplies and serve as launch-points for distributed operations. In order for these locations to enable any of these operations and support U.S. and allied objectives in the region, however, they must remain open or recovery quickly in the face of adversary long-range strike capabilities. In addition, there should be new force structure that is less base (and runway) dependent. Thus, the United States must examine options for forward-deploying less base dependent force structure, including additional counterstrike assets in power projection hubs like Guam and Okinawa in order to increase posture resilience.²⁰

18 Defense of Guam has become a top priority for DoD and INDOPACOM. For more information, see C. Todd Lopez, "Time for Guam Missile Defense Build-Up is Now," *U.S. Department of Defense*, December 8, 2021, <https://www.defense.gov/News/News-Stories/Article/Article/2866855/time-for-guam-missile-defense-build-up-is-now/>

19 For purposes of this report, there is not a detailed discussion of dispersal bases or base clusters. It is assumed that both Okinawa and Guam, will have dispersal locations apart from their main operating bases (MOBs). For the Agile Combat Support (ACE), it is assumed there are dispersal bases that have a variety of names. For Guam, it could include the CNMI and other Second Island locations. For Okinawa, it assumes the Southwest Island Chain and other parts of Japan.

20 David Ochmanek, "Determining the Military Capabilities Most Needed to Counter China and Russia," RAND National Security Division (NDR), June 2022, <https://www.rand.org/pubs/perspectives/PEA1984-1.html>.

Report Roadmap

This report will reconceptualize posture resiliency by arguing for a new framework that emphasizes forward-deployed counterstrike capabilities in key installations in the Indo-Pacific. It will first give a brief overview of U.S. force posture in the Indo-Pacific since the end of the Cold War, highlighting the lack of substantial changes in posture and resiliency in the theater amidst increasingly threatening PLA long-range capabilities. It will then explore and evaluate the current force posture and resiliency for both Guam and Okinawa, with a particular emphasis on the Air Force and land-based air for the U.S. Navy and USMC. The report will then outline a set of options and recommendations for posture adjustments at these two locations to better enable posture resiliency through enhanced counterstrike and other capabilities.

CHAPTER 1

A History of Indo-Pacific Force Posture After the Cold War

From the end of the Cold War to President Obama’s “Rebalance to Asia and the Pacific” in 2011, U.S. global defense posture underwent two significant changes or realignments. The first significant change occurred after the Cold War ended. The Base Force and the Bottom-up Review (BUR) significantly shrank force structure (by ~25%) and personnel (by ~33%) following the dissolution of the Soviet Union. Concurrently, the proportion of overseas military personnel also shrank significantly.²¹ In conjunction with those reductions, the United States dramatically reduced the number of bases outside of the continental United States (OCONUS) over time. It returned thousands of soldiers, sailors, airmen, and Marines to bases in the continental United States (CONUS), beginning the intent to return to a service expeditionary posture during the peace dividend era of the 1990s. In this way, the United States aimed to shift away from forward-based forces that could respond immediately to crises in distant regions of the globe.

After 9/11, the global defense posture experienced another significant change as DoD pushed to change strategy and readopt a Garrison Posture based on forward deployment.²² The 2001 Quadrennial Defense Review (QDR) and the 2002 National Security Strategy (NSS) prompted this global defense posture review (GDPR), setting the foundation for a massive

21 For more information about the implications of the Bottom-up Review, see John T. Correll “The Legacy of the Bottom-Up Review,” *Air Force Magazine*, October 1, 2003, <https://www.airforcemag.com/article/1003bur/#:~:text=Aspin's%20Bottom%20Up%20Review%20of%20force,others%20of%20%E2%80%9Ccoverseas%20presence.%E2%80%9D>

22 Stacie Pettyjohn, *U.S. Global Defense Posture, 1783–2011* (Santa Monica, CA: RAND PAF, 2015), 87, <https://www.rand.org/pubs/monographs/MG1244.html>

study on overseas posture.²³ In 2004, the George W. Bush Administration published the results of that review in a pivotal report titled *Strengthening U.S. Global Posture*.²⁴ The Bush administration proposals were intended to bring about the “most profound reordering of U.S. military troops in about 50 years.”²⁵

In the context of the Indo-Pacific, this body of work laid out the critical importance of naval and airpower projection from Guam. Subsequently, the USAF started to work on options to develop an ISR/Strike capability at Andersen. An Environmental Impact Statement (EIS) was prepared and completed in November 2006, resulting in a Record of Decision in January 2007.²⁶ The selected strike portfolio “would base as many as 12 KC-135 tankers and four Global Hawks and personnel at Andersen AFB and rotate as many as 48 fighters (F-22 and F-15E) and six bombers (B-1, B-2 and B-52) and personnel from bases in the 50 states.”²⁷ The name for this proposal later became known as “Guam Strike.”²⁸

The GDPR planned to close Marine Corps Air Station (MCAS) Futenma and relocate the marines from Okinawa to Guam as part of the U.S.-Japan alliance’s Defense Policy Review Initiative (DPRI).²⁹ The DPRI, which started in 1996, focuses on the redistribution of Japan-based U.S. forces throughout the Indo-Pacific, with numerous studies supporting the relocation of Marines to Guam, Hawaii, and elsewhere. The DPRI constituted the de facto

23 The 2001 QDR was written prior to 9/11 but the report was released with an updated foreword discussing 9/11. Although the report was overtaken by the critical events of 9/11, China was mentioned for the first time in the 2001 QDR. China was mentioned 11 times in the 2010 QDR—one less than the 12 times in the 2006 QDR.

24 DoD, *Strengthening U.S. Global Defense Posture Report to Congress*, (Washington, D.C.: DoD, September 2004).

25 The proposals called for the closing of ~35% of all overseas bases while transferring 70,000 U.S. troops, plus 100,000 dependents and civilians primarily from Germany, Japan, and South Korea back to the U.S. This preceded the 2005 Base Relocation and Closure (BRAC) Commission, which used this vital information from the GDPR to make recommendations on which CONUS bases should be closed or modified, taking into account the military personnel and equipment returning from overseas.

26 Federal Register, Vol. 17, No. 14, 72 FR 2871 - Establishment and Operation of an Intelligence, Surveillance, Reconnaissance, and Strike Capability, Andersen Air Force Base, Guam - Content Details - E7-893 (govinfo.gov), January 23, 2007, p. 2871. <https://www.govinfo.gov/app/details/FR-2007-01-23/E7-893>

27 Department of the Air Force, Pacific Air Forces, “Final Environmental Impact Statement Establishment and Operation of an Intelligence, Surveillance, Reconnaissance, and Strike Capability Andersen Air Force Base, Guam Volume 1”, November 2006, pp. ES-1 to ES-7.

28 *Military Buildup on Guam: Costs and Challenges in Meeting Construction Timelines*, GAO-11-459R (Washington, D.C: Government Accountability Office, 2011), 6, <https://www.gao.gov/assets/gao-11-459r.pdf>

29 The Defense Policy Review Initiative (DPRI) has impacted both islands of Okinawa and Guam in a significant manner. The DPRI has a history that dates back to 1995--some 26 years. In 1996, the bilateral Security Consultative Committee (also known as the “2+2”) established the Special Actions Committee on Okinawa (SACO). The 1996 SACO Final Report required land to return to Okinawa, including MCAS Futenma, while building the Futenma Replacement Facility (FRF), which had settled on a location near Camp Schwab. For additional information, see Government Accountability Office, *Marine Corps Asia Pacific Realignment: DoD Should Resolve Capability Deficiencies and Infrastructure Risks and Revise Cost Estimates*, April 2017, <https://www.gao.gov/assets/gao-17-415.pdf>
<https://www.gao.gov/assets/gao-17-415.pdf>

center of activity during Obama's Rebalance to Asia and the Pacific and continued well into the Trump administration as the United States sought to modify its Indo-Pacific posture.³⁰

These posture actions moved slowly with minimal change in the makeup and placement of forces in the Indo-Pacific. It appeared that the Bush Administration was poised to start a rebalance to the Pacific with the 2006 QDR, with other reports recommending the reduction of posture in the Middle East and Europe while changing and augmenting the force posture in the Indo-Pacific.³¹ However, some of those changes—especially in the Air Force—stalled due to the conflicts in Iraq and Afghanistan and the need for bases in CENTCOM to coordinate military operations in those countries.³²

In early 2009, key Air Force leaders were concerned about the atrophy of numerous overseas bases, as post-Cold War “overseas base constriction” began to significantly constrain American military power projection.³³ As China began to emerge as a near-peer adversary, however, Beijing developed counter-intervention, anti-access and area denial (A2/AD) strategies in an effort to stop the flow of forces into the theater.³⁴ U.S. defense planning has depended heavily on external surge forces from outside the AOR, which would also be reliant upon force posture already situated within the theater. In almost all cases, that forward force structure had little to no passive defenses, active defenses, or forward-based counterstrike assets to make them resilient, raising concerns about the survivability of U.S. forces in a contingency.

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- 30 For more information on the Rebalance, see David Berteau, Michael Green, et al, U.S. Force Posture Strategy in the Asia Pacific Region: An Independent Assessment (Washington, DC: CSIS, 2012), https://csis-website-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/120814_FINAL_PACOM_optimized.pdf. A follow-on assessment of initial rebalance actions and recommendations for sustaining the rebalance by 2025, see Michael Green, Kathleen Hicks, Mark Cancian et al., *Asia-Pacific Rebalance 2025: Capabilities, Presence and Partnerships* (Washington, DC: CSIS, January 2016). The White House, “Fact Sheet: Advancing the Rebalance to Asia and the Pacific,” November 16, 2015, <https://obamawhitehouse.archives.gov/the-press-office/2015/11/16/fact-sheet-advancing-rebalance-asia-and-pacific>
- 31 Department of Defense, *Quadrennial Defense Review Report* (Washington, DC: Department of Defense, 2006), p. 47, <https://history.defense.gov/Portals/70/Documents/quadrennial/QDR2006.pdf?ver=2014-06-25-111017-150>. In the 2006 QDR, DoD states that the U.S. Navy will transfer more assets to the Pacific and realign posture in the region, with the expectation that 60% of the service's submarines and a minimum of six aircraft carriers will be available in the theater to carry out operations; For a more detailed account about the George W. Bush administration's approach to Indo-Pacific realignment, see Nina Silove, “The Pivot Before the Pivot: U.S. Strategy to Preserve the Balance of Power in Asia,” *International Security* 40, no. 4 (Spring 2016): pp. 45-88.
- 32 Thomas P. Ehrhard, *An Air Force Strategy for the Long Haul*, (Washington, DC: CSBA, 2009), pp. 19-21, <https://csbaonline.org/uploads/documents/2009.09.17-An-Air-Force-Strat.pdf> and Stacy Pettyjohn and Alan Vick, *The Posture Triangle: A New Framework for U.S. Air Force Global Presence* (Santa Monica, CA: RAND Project Air Force, 2013), https://www.rand.org/content/dam/rand/pubs/research_reports/RR400/RR402/RAND_RR402.pdf. Regardless of the Bush 43 administration plans for significant OCONUS posture reductions writ large, the U.S. expanded overseas bases, created many new operating locations, and deployed close to 200,000 U.S. military personnel to the Middle East (primarily in Iraq and Afghanistan) at its peak with thousands of additional personnel and contractors in the region to support those efforts.
- 33 Ehrhard, *An Air Force Strategy for the Long Haul*, p. 21.
- 34 Matthew Jamison, “Countering China's Counter-Intervention Strategy,” *The Strategy Bridge*, August 11, 2020, <https://thestrategybridge.org/the-bridge/2020/8/11/countering-chinas-counter-intervention-strategy>

The 2010s: A Decade of Limited Posture Action

The 2010 QDR found strong support for forward deployed personnel because of their role in global power projection and the ability to deter adversaries, assure allies and partners, and support efforts to respond to crises and contingencies.³⁵ Notably, the 2010 QDR also emphasized the importance of “resiliency for forward-based infrastructure and forces.”³⁶ The QDR gave a generic description of that resilience, stating it involved “combinations of measures, including hardening key facilities against attack, redundancy and dispersal concepts, counterintelligence, and active defenses, complemented by long-range platforms for ISR and strike operations.”³⁷ Although the QDR’s description of resiliency offered options, it did not immediately result in significant improvements to basing or operational concepts in the Indo-Pacific.

The 2010 QDR’s findings coincided with the Department’s growing emphasis on a Rebalance to Asia and the Pacific.³⁸ In January 2012, President Obama released the Defense Strategic Guidance (DSG) that directed a rebalancing of military forces toward the Asia Pacific and a myriad of national security efforts across the government. In line with these efforts to restructure posture towards the region, Japan and the United States produced a joint statement in April 2012 that laid out four initiatives under DPRI that were specific to the realignment of Marine Corps forces in the Pacific:³⁹

1. Construction and moving forces to the Futenma Replacement Facility (FRF).
2. Relocating Marine Corps units from Okinawa to Guam, Hawaii, the continental United States, and Australia.

35 Quadrennial Defense Review Report, 2010, p. 62.

36 Quadrennial Defense Review Report, 2010, p. ix.

37 Quadrennial Defense Review Report, 2010, p. 33.

38 See Jack McCaffrie and Chris Rahman, *The U.S. Strategy Relationship with Australia*, Chapter 4, p. 100, in Carnes Lord and Andrew S. Erickson (eds.), *Rebalancing U.S. Forces: Basing and Forward Presence in the Asia-Pacific* (Annapolis, MD: Naval Institute Press, 2014). Also see the AUSMIN, “Australia-United States Ministerial Consultations Joint Communique,” San Francisco, September 15, 2011, available at <https://www.dfat.gov.au/geo/united-states-of-america/ausmin/Pages/ausmin-joint-communicue-2011>; Stephen Smith MP, “Minister for Defence: Response to Question without Notice in the House of Representatives,” *Commonwealth Parliamentary Debates*, November 21, 2011, p. 12942; Available at <https://www.minister.defence.gov.au/minister/lreynolds/media-releases/us-marines-arrive-darwin>. Part of this shift to the Indo-Pacific also called for greater U.S.-Australia bilateral defense cooperation. In November 2010, Robert Gates, Secretary of Defense agreed, “to create a bilateral force posture working group to begin developing options for enhanced joint defense cooperation on Australian soil” after the Australia-United States Ministerial (AUSMIN) Consultations. In September 2011, the AUSMIN joint communique talked to increased U.S. access to training facilities, prepositioning equipment, increased use of facilities and ports while increasing joint and combined activities. In 2012, several months later, two hundred Marines deployed to RAAF Darwin and various facilities in northern Australia as part of a Marine Rotational Force-Darwin (MRF-D).

39 U.S.-Japan Security Consultive Committee, *Joint Statement of the Security Consultive Committee*, April 26, 2012, https://www.mofa.go.jp/region/n-america/us/security/scs/pdfs/joint_120427_en.pdf and Marine Corps Asia-Pacific Realignment, p. 7. All four initiatives are discussed in the joint US-Japan statement but the transfer of Marines to Iwakuni is also discussed in the Marine Corps Asia Pacific-Realignment.

3. Consolidating installations on Okinawa.

4. Moving Marines to Iwakuni.

Simultaneously, independent assessments called for the relocation of co-located U.S. military forces in Japan as well as a heavier U.S. footprint in Guam and Australia with a focus on Air Force and Navy force structure. Specifically, such recommendations called for more capabilities and infrastructure for Guam, including additional attack submarines, a new fuel pipeline, dispersal locations for aircraft with an emphasis on tankers, and hardened shelters for fighters.⁴⁰ They also emphasized the creation of a new military installation to replace Marine Corps Air Station (MCAS) Futenma, the transfer of Marines from Okinawa to Guam, and the importance of a permanently based bomber squadron and two squadrons of tactical airpower at Andersen Air Force Base (AAFB) on Guam.⁴¹ However, by 2016, nothing substantive had been accomplished regarding the improvement of U.S. power projection capabilities for forces based in the Indo-Pacific. At that time, installations such as AAFB had only invested in logistical improvements or enablers, including new munitions storage facilities and the ability to load munitions on aircraft when required to generate combat sorties.⁴²

The United States has only incrementally improved Guam's resiliency since 2016 and it remains wholly insufficient as a strategic hub for U.S. power projection in its present state. During the height of DPRI funding over the last several years, the emphasis on passive defenses appears to have slowed dramatically. INDOPACOM has only begun to recently focus on constructing active defenses on Guam through formal requests for such assets in the 2021 and 2022 versions of the Pacific Deterrence Initiative (PDI).⁴³ In addition, power projection and counterstrike capabilities on the island were set back with the USAF's termination of its 16-year Continuous Bomber Presence (CBP) initiative in April 2020. The bomber presence on Guam is now only on an episodic or ad-hoc basis and other significant

40 Berteau, D., Green, M. et al, *U.S. Force Posture Strategy in the Asia Pacific Region: An Independent Assessment* (Washington, DC: CSIS, 2012), https://csis-website-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/120814_FINAL_PACOM_optimized.pdf. The author was interviewed several times on this topic by CSIS and the focus on hardening (i.e., hardened aircraft shelters) wanted for combat aircraft. Due to the operational flexibility of tankers, the CSIS authors want to focus on tanker dispersal versus hardened shelters for large aircraft.

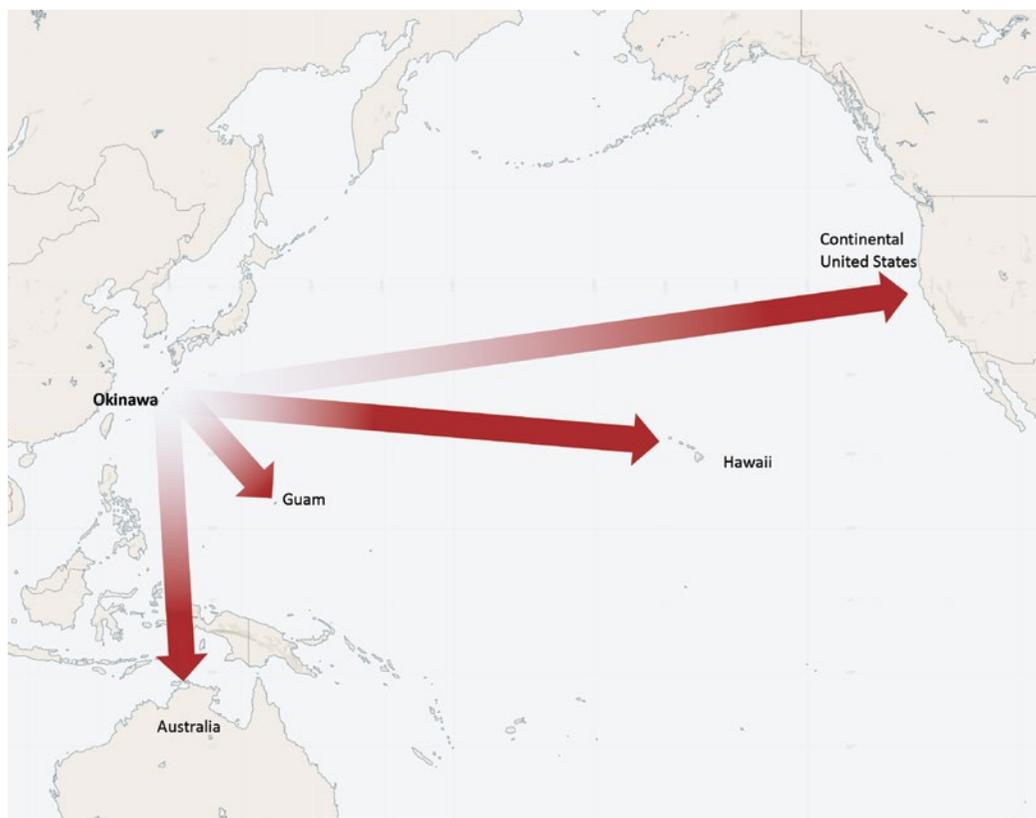
41 Berteau and Green, *U.S. Force Posture Strategy in the Asia Pacific Region*, p. 75. See also the Commission On Review Of Overseas Military Facility Structure of the United States, May 2005, p. H11, <https://irp.fas.org/agency/dod/obc.pdf>. "Andersen AFB will be developed as a Strike/ISR hub with up to two squadrons of tactical aviation, rotational bomber presence, and a Global Hawk detachment." This led to what was later described as Guam Strike.

42 These improvements were determined from a review of MILCON requests for AAFB, Guam, from FY2010 through FY2021.

43 The Pacific Deterrence Initiative (PDI) is a list of capabilities and investments that INDOPACOM formally submits to Congress to better enhance U.S. defense posture in the AOR. For more information on PDI and active defenses, see Office of the Undersecretary of Defense (Comptroller), Pacific Deterrence Initiative, May 2021, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2022/fy2022_Pacific_Deterrence_Initiative.pdf

parts of Guam Strike seem to have evaporated.⁴⁴ The U.S. bomber force also appears to have severe readiness and sustainment problems as well as shrinking capacity issues, with the USAF divesting 17 B-1B aircraft even before the B-21's induction into the strategic bomber fleet in the mid-2020s.⁴⁵

FIGURE 1: DPRI REDISTRIBUTION OF USMC FORCES⁴⁶



Source: Northstar Map courtesy of Mapbox; Graphic adapted from map found in Government Accountability Office, *Marine Corps Asia Pacific Realignment: DoD Should Resolve Capability Deficiencies and Infrastructure Risks and Revise Cost Estimates*, April 2017, p. 9, <https://www.gao.gov/assets/gao-17-415.pdf>

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- 44 Joseph Trevithick, "The Air Force Abruptly Ends Its Continuous Bomber Presence On Guam After 16 Years," *The Drive*, April 17, 2020, <https://www.thedrive.com/the-war-zone/33057/the-continuous-strategic-bomber-presence-mission-to-guam-has-abruptly-ended-after-16-years>
- 45 Lt. Carla Pampe, "Planning for B-21 Raider, Air Force Retires 17 B-1B Lancers," *Aerotech News and Review*, October 1, 2021, available at <https://www.aerotechnews.com/edwardsafb/2021/10/01/planning-for-b-21-raider-air-force-retires-17-b-1b-lancers/>. Despite the retirements of these 17 bombers, Congress has temporarily halted these divestments until the B-21 is operational, with Section 133 of the FY2022 NDAA: "The Senate amendment contained a provision (sec. 149) that would prohibit further reductions in B-1 bombers until such time as the B-21 aircraft begins fielding."
- 46 USMC forces continue to be redistributed throughout the Indo-Pacific as part of the DPRI, but throughout the same timeframe of this initiative, the U.S. Navy and the Air Force experienced no major changes in their force posture in the region.

Despite DoD's intent to shift resources to INDOPACOM and realign forces to meet U.S. objectives in the region, Indo-Pacific force posture as a whole did not radically change since the end of the Cold War. Regional contingencies in locations such as the Middle East and North Africa (MENA) forced the U.S. military to expand and sustain its presence in CENTCOM. Consequently, Washington has largely maintained the same posture over the past 30 years in Indo-Pacific, with much of the pre-existing force structure centralized primarily in Okinawa and Guam. Moreover, much of this force structure lacks adequate protection and locally-based counterstrike, limiting posture resiliency across the theater.

The challenge of force reallocation in the post-Cold War era demonstrates that posture change is essentially sticky and unchanging. However, Okinawa and Guam are still important for U.S. defense strategy regardless of how posture changes in the Indo-Pacific in the future. Both locations remain critically important in their ability to act as transit points for forces flowing into the region. Therefore, to evaluate force posture and its resiliency over the long term, one must examine what has been accomplished so far and what still needs to be implemented on Okinawa and Guam.

CHAPTER 2

Case Study 1: Okinawa

Okinawa serves as a key U.S. power projection hub along the First Island Chain, and houses critical USAF and USMC units that would most likely be the first to respond to contingencies in the Taiwan Strait, East China Sea, and South China Sea. Despite its importance, critics have widely questioned the value of Okinawa and the survivability of U.S. forces on the island due to their proximity to mainland China, with some calling for fewer investments in infrastructure and forces on the island.⁴⁷ The narrative is that since locations such as Okinawa are under enormous threat from the PLA due to proximity and vulnerability to a preemptive strike, keeping the critical bases on Okinawa viable for any sustained operations represents a significant challenge.⁴⁸ According to this logic, there appears to be more willingness to invest in Guam and the Second Island Chain but little or no emphasis on the First Island Chain due to its vulnerability, with some strategists treating Guam/the Second Island Chain as the primary fallback location and bastion from which to conduct military operations during a crisis.⁴⁹

47 Jack Detsch, “Pentagon Faces Tense Fight Over Pacific Pivot,” *Foreign Policy*, June 7, 2021, <https://foreignpolicy.com/2021/06/07/biden-pivot-china-pentagon/>; Thomas Newdick, “U.S. F-15s to Leave Okinawa Without Permanent Replacement: Report,” *The Drive*, October 27, 2022, <https://www.thedrive.com/the-war-zone/u-s-f-15s-to-leave-okinawa-without-permanent-replacement-report>

48 Thomas Shugart and Javier Gonzalez, *First Strike: China’s Missile Threat to U.S. Bases in Asia* (Washington, DC: Center for a New American Security, June 2017), p. 13, <https://s3.us-east-1.amazonaws.com/files.cnas.org/documents/CNASReport-FirstStrike-Final.pdf?mtime=20170626140814&focal=none>

49 For a closer examination of U.S. emphasis on the Second Island Chain, see Derek Grossman, “America is Betting Big on the Second Island Chain,” *The Diplomat*, September 5, 2020, <https://thediplomat.com/2020/09/america-is-betting-big-on-the-second-island-chain/>

Inaction over Okinawa, however, is not an option from both operational and alliance standpoints. Forward-based units along the First Island Chain are necessary to assure allies, respond quickly to crises, and receive and support forces from outside the theater in the conflict area. The United States still has a rationale to invest further in posture resiliency for Okinawa-based forces. Including an attritable force structure and other options on the island significantly lowers the passive and active defense requirements while providing counterstrike forces. Notably, any new force options must support Air Force Agile Combat Employment (ACE) or USMC Expeditionary Advanced Base Operations (EABO) constructs.⁵⁰

Overview of Okinawa Posture and Resiliency

Okinawa hosts over half of the more than 50,000 U.S. military personnel stationed in Japan and about 70% of all facilities and areas used exclusively by U.S. Forces Japan (USFJ).⁵¹ U.S. air assets within Okinawa are broadly divided among two primary installations: Marine Corps Air Station (MCAS) Futenma and Kadena Air Base (AB).

MCAS Futenma, which houses elements of the 1st Marine Air Wing, including Marine Air Group 36 and Marine Air Control Group 18, is slated to be replaced with the FRF, but the cost and timeframe of this project are essentially still undetermined, with increasing opportunity costs for Japan and limited operational utility for U.S. forces.⁵² FRF has diverted significant resources away from posture resiliency assets such as counterstrike and passive/active defenses against PLA threats that help the alliance become much more effective.⁵³

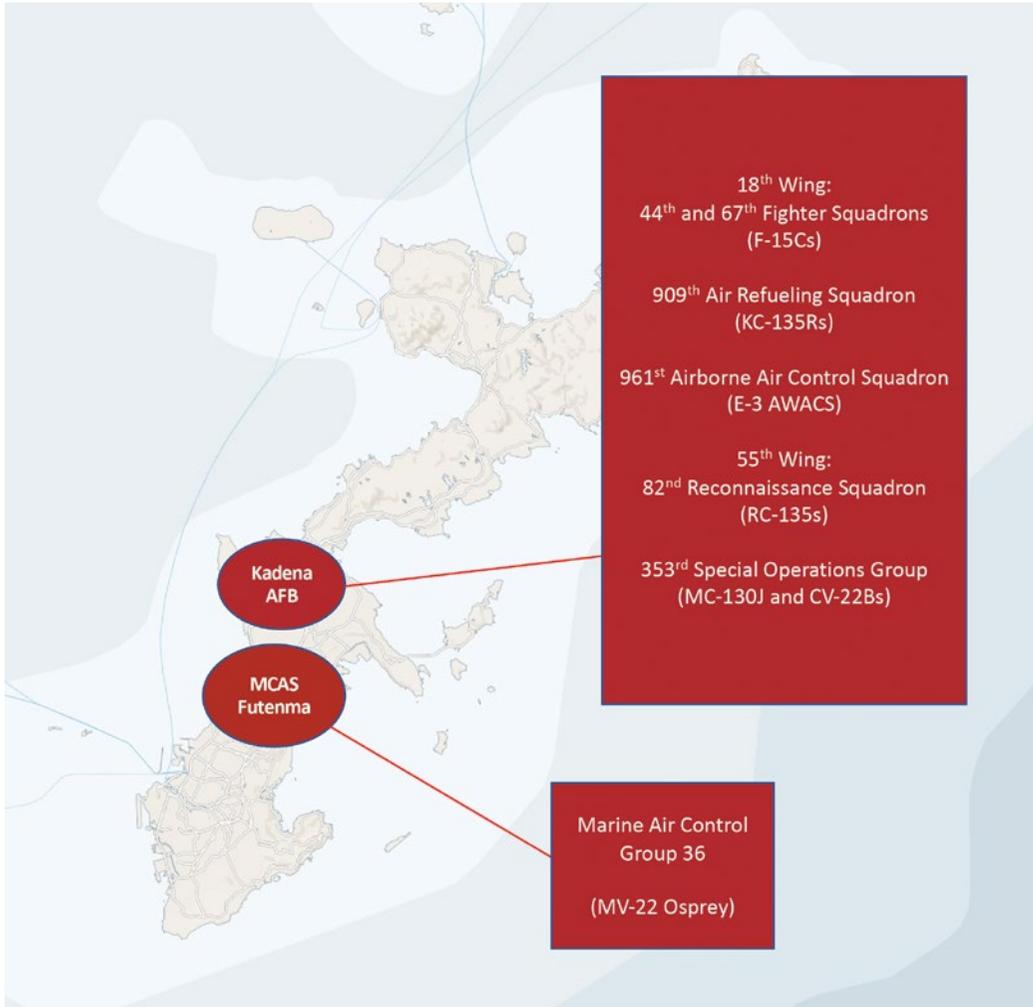
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- 50 For more information on these constructs, see United States Air Force, *Air Force Doctrine Note 1-21. Agile Combat Employment*, December 1, 2021, https://www.doctrine.af.mil/Portals/61/documents/AFDN_1-21/AFDN%201-21%20ACE.pdf and United States Marine Corps, *Expeditionary Advanced Base Operations (EABO) Handbook (Version 1.1)*, June 1, 2018, <https://mca-marines.org/wp-content/uploads/Expeditionary-Advanced-Base-Operations-EABO-handbook-1.1.pdf>
- 51 Congressional Research Service (CRS), *U.S. Military Presence on Okinawa and Realignment to Guam* (Washington, D.C: Library of Congress, April 9, 2019), p. 1, <https://crsreports.congress.gov/product/pdf/IF/IF10672/3#:~:text=The%20United%20States%20agreed%20to,and%20dependents%20to%20be%20relocated.>
- 52 In 2013, Japan's MoD initially estimated that the FRF would take five years to build and cost ~\$2.1B. However, in 2018, the Okinawa government revised its estimates. It stated it would like to have a new cost estimate of ~\$22.7B and take ~13 years to complete the project. Ironically, the FRF does not meet the primary Marine requirements (i.e., runway length) even at the original cost and schedule. Group 36 consists of two transport and assault heliborne craft support groups, including the CH-53E Super Stallion, the MV-22 Osprey, the AH-1Z Viper, and UH-1Y Huey. Group 18 coordinates command-and-control functions and air operations for the 1st Marine Air Wing.
- 53 Whereas the Subcommittee on Readiness of the US House Armed Services Committee included in FY21 NDAA words directing "the Secretary of Defense to provide a report to the House Committee on Armed Services, not later than December 1, 2020, on the Futenma Replacement Facility"; and whereas, this means that the reports on that subject required by FY20 NDAA were considered inadequate by the Subcommittee.

Kadena AB houses elements of the 18th Wing, constituting various units focused on tasks such as maintenance, mission support, medical, and operations. The 18th Wing contains the 44th and 67th fighter squadrons, which operate F-15C aircraft in terms of air superiority assets. USAF, however, expects to gradually withdraw these squadrons from the base in favor of replacing them with rotational units comprised of 5th generation fighters such as the F-22 in the short-term. No concrete plans, however, have been determined for the fighter force posture on Kadena in the long-term.⁵⁴ Kadena also houses KC-135R aerial tankers attached to the 909th Air Refueling Squadron as well as E-3 airborne warning and control system (AWACS) aircraft belonging to the 961st Airborne Air Control Squadron. Air reconnaissance assets at the airbase include RC-135 aircraft operated by the 82nd Reconnaissance Squadron, which is assigned to 55th Wing of Air Combat Command. The Air Force's Special Operations Command's 353rd Special Operations Group also operates from Kadena and is primarily equipped with mobility and special operations assets such as the MC-130J and the CV-22B. Significant projects on Kadena AB include multiple large infrastructure initiatives: (1) MC-130 Operations Complex; (2) New P-8 Operations Complex; and (3) F-35B infrastructure at Kadena for temporary deployments of these aircraft from MCAS Iwakuni.⁵⁵ Open-source information indicates that Kadena has increased capability for rapid airfield damage repair (RADR).⁵⁶ Still, by all appearances, none of the new military construction (MILCON) has included any hardening and DoD and USAF did not increase Kadena's passive defenses beyond RADR or its active defenses.

54 Stephen Losey, "Air Force to Replace Kadena F-15 Squadrons with Rotational Fighters," *Defense News*, October 27, 2022, <https://www.defensenews.com/air/2022/10/27/air-force-to-replace-kadena-f-15-squadrons-with-rotational-fighters/>

55 Author's personal visit to Okinawa, including Kadena AB in December 2019.

56 See Senior Airman Stephen G. Eigel, "Pacific Air Force Civil Engineers Improve Airfield Repair Skills," *U.S. Indo-Pacific Command*, September 16, 2016, <https://www.pacom.mil/Media/News/News-Article-View/Article/947631/pacific-air-force-civil-engineers-improve-airfield-repair-skills/> and Staff Sgt. Savannah L. Waters, "Kadena AB's 18th CEG Undergoes Airfield Damage Repair Training," *Stars and Stripes Okinawa*, November 1, 2021, <https://okinawa.stripes.com/spotlight/kadena-abs-18th-ceg-undergoes-airfield-damage-repair-training>

FIGURE 2: OKINAWA FORCE POSTURE IN 2022

Source: Northstar Map Courtesy of Mapbox; Graphic inspired by Okinawa graphic in Michael Green, Kathleen Hicks, Mark Cancian, et al. *Asia-Pacific Rebalance 2025: Capabilities Presence and Partnerships, An Independent Review of U.S. Defense Strategy in the Indo-Pacific* (Washington, D.C.: Center for Strategic and International Studies, 2016), p. 37, https://csis-website-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/160119_Green_AsiaPacificRebalance2025_Web_o.pdf

Evaluating Okinawa Posture Resilience

Based on available information about the infrastructure and forces based in Okinawa, U.S. forces on the island are not resilient enough to withstand attacks from the PLA. There is an overall lack of sufficient passive defenses, active defenses, and counterstrike capabilities to mitigate threats from the PLA. Since the Rebalance to Asia and the Pacific, there has been no indication of any hardened infrastructure at Kadena to support the installation's robust, rapid airfield damage repair (RADR) capabilities.⁵⁷ The presence of USA PAC-3 MSE batteries is critically important, but there are no known cruise missile defense or counter-unmanned aerial system (C-UAS) capabilities. The JASDF has deployed PAC-3MSE batteries and, since 2019, has deployed Chu-SAMs and Tan-SAMs, which provide Okinawa with some active defense capabilities.⁵⁸ However, whether these assets could be quickly integrated with U.S. IAMD assets is unknown.

The current force structure at Kadena provides few counterstrike capabilities. More modern airframes, such as the F-35A/B and F-22A, rotate in and out of the area but are not permanently deployed to the island, leading to possible gaps in available forces during a crisis.⁵⁹ Existing U.S. forces and infrastructure at both Kadena and Futenma largely focus on logistics, maintenance support, and airlift, but neither base possesses a strong, permanently stationed counterstrike contingent. Both the U.S. and Japanese F-15s currently based on the island are capable of Defensive Counter Air missions, but their counterstrike potential is minimal. There is also the larger question of whether these older, 4th generation F-15 variants would be survivable in air-to-air engagements with newer PLA Air Force (PLAAF) 4.5 or 5th generation aircraft such as the J-16, J-10, and J-20. There are currently efforts, however, to replace and modernize the legacy F-15C/D fleet and replace many of them with newer F-15EX aircraft.⁶⁰ The F-15EX could also partner with various kinds of attritable aircraft that incorporate manned-unmanned teaming (MUM-T) such as the "Loyal Wingman," (MQ-28 Ghost Bat) or MQ-58A Valkyrie.⁶¹ Yet, with the F-15EX still to be procured in larger quantities and the F-15C/D fleet's mission-capable

57 Author's personal visit to Okinawa, including Kadena AB in December 2019.

58 "Japan Has Started Deploying Type 03 Chu-SAM to Southwestern Islands," *Alert 5*, March 19, 2019, <https://alert5.com/2019/03/19/japan-has-started-deploying-type-03-chu-sam-to-southwestern-islands/>

59 For an example of such rotational deployments, see Franz-Stefan Gady, "US Deploys F-22 Stealth Fighters to Japan Ahead of Trump-Kim Summit," *The Diplomat*, June 6, 2018, <https://thediplomat.com/2018/06/us-deploys-f-22-stealth-fighters-to-japan-ahead-of-trump-kim-summit/>

60 For more information on this modernization, see John R. Hoehn, *Air Force F-15EX Eagle II Fighter Program*, CRS Report No. R46801, (Washington, DC: Congressional Research Service, 2022), <https://crsreports.congress.gov/product/pdf/R/R46801>

61 Meredith Roaten, "Just In: Commander Wants New F-15EX Jet Fighter for Indo-Pacific Ops," *National Defense*, March 14, 2022, <https://www.nationaldefensemagazine.org/articles/2022/3/14/pacific-air-forces-commander-calls-for-next-gen-fighter-jets-early-warning-acquisition>

availability dropping to less than 45%, there are significant concerns about the readiness and capabilities of the fighter force structure based at Kadena.⁶²

Most of the current force structure at Kadena AB cannot fully implement ACE, especially the doctrine's emphasis on dispersal.⁶³ Little to no hardening of infrastructure, few hardened shelters, few other passive defenses, limited active defenses, and a very narrow set of counterstrike capabilities indicate that posture resiliency for Okinawa-based U.S. forces is limited at best.

62 John A. Tirpak, "USAF Aircraft Availability on Long Downward Trend, CBO Says," *Air Force Magazine*, January 10, 2022, <https://www.airforcemag.com/usaf-aircraft-availability-on-long-downward-trend-cbo-says/>

63 Meredith Roaton, "JUST IN: Commander Wants New F-15EX Jet Fighter for Indo-Pacific Ops", *National Defense*, March 14, 2022, <https://www.nationaldefensemagazine.org/articles/2022/3/14/pacific-air-forces-commander-calls-for-next-gen-fighter-jets-early-warning-acquisition>; Note: In this article, General Wilsbach implies what this study postulates. The combination of poor readiness of the F-15C fleet, and the high readiness and new capabilities of the F-15EX will allow a higher ACE effectiveness. In addition, the conformal tanks on the F-15EX will give it significantly better range and endurance with increased weapons flexibility—all critical to ACE.

CHAPTER 3

Case Study 2: Guam

Guam functions as an important hub of power projection in the Indo-Pacific along the Second Island Chain, providing an ideal forward operating location for bombers and other aircraft. AAFB on Guam has some of the most extensive aviation fuel storage and munitions storage facilities in the world and has sustained U.S. operations throughout the region for decades. However, the PLA's development of various long-range weapons, such as the DF-26 intermediate-range missile, and air-launched cruise missiles (ALCMs), such as the CJ-20, have placed Guam under increasing threat.⁶⁴

Overview of Guam Posture and Resiliency

U.S. air assets in Guam are primarily based out of Andersen Air Force Base near the island's northern tip. Andersen is the home of the 36th Air Wing, whose sub-units coordinate day-to-day activities on the base and provide operational and logistical support to other air units as part of the Wing's focus on power projection and combat preparation. The base also permanently hosts a detachment of RQ-4 Global Hawk remote-piloted aircraft from the 319th Reconnaissance Wing and houses the 734th Air Mobility Squadron, which regularly participates in airlift operations and humanitarian assistance and disaster relief. Andersen is an essential forward base for the U.S. strategic air fleet, providing

64 For more information on Chinese threats to Guam, see Jordan Wilson, "China's Expanding Ability to Conduct Conventional Missile Strikes on Guam," *U.S.-China Economic and Security Review Commission*, May 10, 2016, https://www.uscc.gov/sites/default/files/Research/Staff%20Report_China%27s%20Expanding%20Ability%20to%20Conduct%20Conventional%20Missile%20Strikes%20on%20Guam.pdf

key maintenance to U.S. bombers such as the B-52, B-1, and B-2. Although the Air Force no longer sends bombers to the base on a regular rotational basis through Continuous Bomber Presence (CBP) missions, AAFB continues to serve as a critical installation for these aircraft as part of DoD's focus on ad-hoc deployments with the Dynamic Force Employment concept. The Air Force would also use AAFB as a main operating base (MOB) during contingency or crisis by enabling dispersal as a hub, spoke, or staging base through ACE operations.⁶⁵

Over the past few decades, U.S. defense planners tried to envision ways in which Guam could contribute to military operations in the Indo-Pacific and become a power projection hub. According to the 2004 Overseas Basing Commission, moving assets from the continental United States to Guam "permits more persistent ISR coverage, peacetime intelligence gathering/tracking, and prompt strike capability." By contrast, crisis deployment of U.S.-based assets "would not only require scarce airlift sorties to deploy squadron support packages but could also be viewed as provocative and complicate crisis management."⁶⁶ At the time, defense planners understood the operational utility of forward-deployed units that could respond in a timely manner to crises in the region, rather than surging forces into the area reactively in a way that could be perceived as escalatory by adversaries in the theater.

The basing study also recommended the relocation of Marines from Okinawa to Guam and supported AAFB's development as a Strike/ISR hub with up to two squadrons of tactical aviation, rotational bomber presence, a Global Hawk detachment, and necessary rotational aircraft for support (e.g., tankers).⁶⁷ As a follow-on, the Air Force developed Guam Strike based on the study's recommendations, which remained the plan for several years. The 2011 GAO report, *Military Buildup on Guam*, discussed the future capability of Guam Strike in addition to the Marines' transfer to Guam as part of the DPRI.⁶⁸ These

65 Staff Sgt. Divine Cox, "Andersen AFB Supports ACE Reaper," *Andersen Air Force Base*, October 25, 2021, <https://www.andersen.af.mil/News/Features/Article/2822221/andersen-afb-supports-ace-reaper/>; See also, Abraham Mahshie, "MQ-9 Reapers Prove Value in ACE Pacific Operation" *Air Force Magazine*, August 3, 2022, <https://www.airforcemag.com/mq-9-reapers-prove-value-in-ace-pacific-operation/>

66 Hon Al Cornella, MG Lewis E. Curtis III, VADM Anthony Less, BG Keith Martin, LTG H.G. Taylor, and Dr. James A. Thomson, *Commission on Review of Overseas Military Facility Structure of the United States*, May 9, 2005, J4, <https://irp.fas.org/agency/dod/obc.pdf>

67 Hon Al Cornella, MG Lewis E. Curtis III, VADM Anthony Less, BG Keith Martin, LTG H.G. Taylor, and Dr. James A. Thomson, *Commission on Review of Overseas Military Facility Structure of the United States*, May 9, 2005, H11, <https://irp.fas.org/agency/dod/obc.pdf>

68 *Military Buildup on Guam: Costs and Challenges in Meeting Construction Timelines*, GAO-11-459R (Washington, D.C: Government Accountability Office, 2011), p. 6, <https://www.gao.gov/assets/gao-11-459r.pdf>

assessments determined that AAFB would host robust power projection capabilities (including counterstrike) sometime in the future. However, it was difficult to ascertain the exact DPRI impacts and the possible delays they would cause for Guam Strike. Furthermore, the United States also needed to find ways to ensure Guam's survivability in a conflict in order to preserve the island's power projection potential.

In response to growing threats from China and North Korea, the services, DoD, and INDOPACOM took initial steps to account for these adversaries' long-range precision capabilities and the challenges they pose towards Guam.⁶⁹ For instance, the United States adopted some measures to increase AAFB's passive defenses.⁷⁰ Nevertheless, few actions have been taken concerning active defenses, with the notable exception of a Terminal High Altitude Area Defense (THAAD) battery deployment until the Defense of Guam initiative, discussed below, began in 2021.⁷¹

DoD has previously considered AAFB as a MOB outside the adversary's threat range capable of long-term enduring operations at a high operations tempo (i.e., power projection). Changes to the threat environment, however, combined with the lack of critical investments to enable power projection and further posture resilience, have raised questions about AAFB's future role.⁷² In 2021, the INDOPACOM Commander,

69 There are additional challenges of OCONUS infrastructure costs, labor shortages, local politics, national politics, and international politics. For Guam/CNMI, the Environmental Protection Agency (EPA) has added bureaucracy and its associated Environmental Impact Studies (EIS). The Guam/CNMI area has an abysmal track record with EIS, that include many projects starting late and taking many years longer than planned. In addition, the U.S. Fish & Wildlife Service has tremendous power on Guam. Finally, the Munitions and Explosives of Concern Clearance (MECC) regulations and procedures add costs but, importantly, can cause significant delays to any construction.

70 The House 2014 National Defense Authorization Act (NDAA) increased funding for a hardened hanger at AAFB from \$58 to \$128 million. For more information, see Shirley A. Kan, *Guam: U.S. Defense Deployments*, CRS Report No. RS22570 (Washington, DC: Congressional Research Service, 2014), p. 28, <https://sgp.fas.org/crs/row/RS22570.pdf>

71 THAAD was deployed to Guam in 2013 in response to DPRK threats to the island. For more information on the timeline of these threats, see Kan, *Guam: U.S. Defense Deployments*, 10. The issue of the Defense of Guam was first brought up in public by ADM Davidson in January 2020. See Jason Sherman, "Pentagon Considers INDOPACOM Gambit to Replace THAAD with Aegis Ashore on Guam" *Inside Defense*, January 28, 2020, <https://insidedefense.com/daily-news/pentagon-considers-indopacom-gambit-replace-thaad-aegis-ashore-guam/>; In June 2021, ADM Aquilino sent his unfunded requirements and the "Defense of Guam" was his number one priority. See Jen Judson, "DoD Wish List Seeks More Funds to Boost Missile Defense, Weapons Cybersecurity," *DefenseNews*, June 10, 2021, <https://www.defensenews.com/pentagon/2021/06/10/dod-desires-more-funding-to-boost-missile-defense-in-the-pacific-in-wish-list-to-congress/>.

72 Jack Detsch, "Pentagon Faces Tense Fight Over Pacific Pivot," *Foreign Policy*, June 7, 2021, <https://foreignpolicy.com/2021/06/07/biden-pivot-china-pentagon/>

Admiral Philip Davidson, approached these challenges with his “Defense of Guam” plan, which called for comprehensive active defenses for Guam.⁷³ Admiral John Aquilino, who succeeded Davidson as INDOPACOM Commander in April 2021, has reiterated Guam’s strategic importance for the United States and the need to defend the island and operate from it, stating that Guam hosts key capabilities and assets needed to manage crises in the theater.⁷⁴ As such, AAFB could most likely adopt the role of a “Stay-and-Fight” base.⁷⁵ A “Stay and Fight” base is a base with permanent force structure and the appropriate active and passive defenses to enable military operations and power projection even while absorbing and recovering from enemy strikes.⁷⁶ Based on an examination of MILCON and other projects at Guam from FY2010 to FY2019, it appears that the focus of DoD for AAFB was to ensure that it was a de facto “Stay-and-Fight base” with a significant emphasis on posture resiliency.⁷⁷ However, there are no indications of any follow-on projects that would support passive defenses (e.g., hardened shelters) to synergize with INDOPACOM’s Pacific Deterrence Initiative (PDI), an active defense plan for the protection of Guam.⁷⁸

73 Jason Sherman, “Pentagon Begins Work on Aegis Ashore for Guam,” *Inside Defense*, March 9, 2021, <https://insidedefense.com/daily-news/pentagon-begins-work-aegis-ashore-guam>

74 “Our View: Defense of Guam remains top priority for Indo-Pacific Command,” *Pacific Daily News*, June 29, 2022, https://www.guampdn.com/opinion/our-view-defense-of-guam-remains-top-priority-for-indo-pacific-command/article_9dd29e1c-f6a4-11ec-91fc-7b116582e594.html

75 Priebe, Miranda, Alan J. Vick, Jacob L. Heim, and Meagan L. Smith, *Distributed Operations in a Contested Environment: Implications for USAF Force Presentation* (Santa Monica, CA: RAND Corp, 2019), https://www.rand.org/pubs/research_reports/RR2959.html.

76 *Ibid.*, p. 18

77 “Asia Pacific Stability Initiative (APSI) Projects” (Presentation, Air Force Installation and Mission Support Center (AFIMSC) Det 2/CEB, Joint Base San Antonio (JBSA)-Lackland, Texas, November 2019).

78 Each year there is a detailed report to the Congress on MILCON and other important projects by base. The authors reviewed those requests and evaluated them. Those reports can found at Under Secretary of Defense (Comptroller), *Military Construction, Family Housing and Base Alignment and Closure Program (C-1)*, <https://comptroller.defense.gov/Budget-Materials/>

FIGURE 3: GUAM FORCE POSTURE IN 2022



Source: Northstar Map Courtesy of Mapbox; Graphic inspired by Guam graphic in Michael Green, Kathleen Hicks, Mark Cancian, et al. *Asia-Pacific Rebalance 2025: Capabilities Presence and Partnerships, An Independent Review of U.S. Defense Strategy in the Indo-Pacific* (Washington, D.C.: Center for Strategic and International Studies, 2016), p. 41, https://csis-website-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/160119_Green_AsiaPacificRebalance2025_Web_o.pdf

Allied Posture Footprint - RSAF Fighter Detachment. Modest power projection and counterstrike forces could not be based at AAFB today due partly to limitations from the DPRI move, which delayed non-DPRI MILCON because of construction capacity and labor shortages on Guam. However, the abandonment of previous INDOPACOM and Air Force power projection as a priority was likely a more decisive factor. That priority appears to have gone away or been subsumed into another initiative(s), which may preclude credible Air Force power projection options. The only new initiative that involves any force structure at AAFB over the next five years (as of 2022) is the planned movement of a detachment of Republic of Singapore Air Force (RSAF) fighters to AAFB in a section called the North Ramp

(western end).⁷⁹ This location is one of the few areas at AAFB that can accommodate any new U.S. force structure for strike and the associated MILCON.⁸⁰

Since there are no spare hardened hangars at AAFB, a detachment of new fighters would likely require the construction of at least one hangar and associated support facilities requiring substantial MILCON. On March 8, 2021, Admiral Davidson stated that this project would probably have the RSAF share space and facilities with the USAF and other organizations.⁸¹ Even though Singapore is a close partner, it is doubtful that the RSAF fighter detachment will join in any deterrent or combat operations with the United States. Instead, an RSAF fighter presence in Guam will provide more training and cooperation opportunities to improve interoperability while strengthening U.S.–Singapore defense ties.⁸² Once again, planning efforts under a peacetime mentality have provided unhelpful constraints in the much-needed shift to a more combat-oriented operational mentality and force posture in the Indo-Pacific.

An important strategic question is how this detachment will affect the new force structure (e.g., the B-21 and next-generation air dominance (NGAD)) that will likely be coming to AAFB over the next 5–15 years. The current plan for the new RSAF detachment is to base it on the northwest corner of the airfield, commonly referred to as the North Ramp (Figure 4). However, for nearly 15 years, the west end of the North Ramp had been designated for the ISR/Strike complex, which was later renamed Guam Strike (as previously discussed). At one point, Guam Strike was to have fifteen large, hardened hangars, with most of them on the North Ramp and the rest scattered along the South Ramp. These plans, however, have not materialized, and there has not been a detailed explanation as to why plans have changed.

79 The idea of a Republic of Singapore Air Force (RSAF) unit coming to Guam emerged when Prime Minister Lee Hsien Loong visited President Obama at the White House in August 2016. One of their agenda items was the possibility of a future RSAF detachment in Guam. This proposition culminated in a December 2019 meeting between U.S. Secretary of Defense Mark Esper and Singapore Minister for Defence Ng Eng Hen. Both officials signed a non-binding Memorandum of Understanding (MOU) to establish an RSAF permanent fighter training detachment on Guam at AAFB. The RSAF training would likely begin in the mid-to-late 2020s and probably consist of a squadron of F-15SGs, associated support aircraft (e.g., G550 Gulfstream AEW aircraft), and associated permanent personnel. See Lee Min Kok, “Republic of Singapore Air Force Exploring Possibility of Training in Guam,” *The Straits Times*, August 4, 2016, <https://www.straitstimes.com/singapore/republic-of-singapore-air-force-exploring-possibility-of-training-in-guam>; and Nicholas Crisp, “Republic of Singapore Air Force Deploys to Andersen AFB,” *U.S. Air Force*, May 30, 2021, <https://www.af.mil/News/Article-Display/Article/2635749/republic-of-singapore-air-force-deploys-to-andersen-afb/>

80 “Singapore, US Sign Agreement for RSAF Training Detachment in Guam,” *Today*, December 7, 2019, <https://www.todayonline.com/singapore/singapore-us-sign-agreement-rsaf-training-detachment-guam>

81 *Statement of Admiral Philip S. Davidson, U.S. Navy Commander, U.S. Indo-Pacific Command Before the Senate Armed Services Committee on U.S. Indo-Pacific Command Posture*, 117th Cong. (March 2021). https://www.armed-services.senate.gov/imo/media/doc/Davidson_03-09-21.pdf

82 Staff Sgt. Crisp, “Republic of Singapore Air Force Deploys to Guam,” Andersen Air Force Base, May 26, 2021, <https://www.andersen.af.mil/News/Features/Article/2634983/republic-of-singapore-air-force-deploys-to-guam/>

There is also uncertainty over where future counterstrike assets that could comprise a future Guam Strike package can be permanently based at AAFB due to potential conflict with the RSAF basing decision. According to the USAF's Environmental Impact Study (EIS) Scoping brief for AAFB, "the North Ramp Project area would provide additional aircraft parking, fueling, and maintenance infrastructure to allow for greater efficiencies and agility in where and how ground operations are conducted."⁸³ This likely means there would be some utility to the Air Force, but it would depend on whether the RSAF forces stayed at AAFB during a crisis or contingency and other factors.⁸⁴ Although the basing of RSAF forces at AAFB remains a positive decision for long-term defense and cooperation, it is in both parties' interests to identify a more suitable location on the base for the detachment.

FIGURE 4: AAFB NORTH RAMP WITH PROPOSED RSAF DETACHMENT LOCATION HIGHLIGHTED



Source: 13°35'00.23" N, 144°55'36.56" E, LandSat/Copernicus, Google Earth, January 2, 2018. Graphic adapted from images and information found in United States Air Force, *Public Scoping for Infrastructure Upgrades at Andersen Air Force Base, Guam*, p. 2, https://aafbinfrastructureeis.com/application/files/1116/1763/7031/AAFB_Infra_EIS_Scoping_Brochure.pdf

83 United States Air Force, *Public Scoping for Infrastructure Upgrades at Andersen Air Force Base, Guam*, p. 2, https://aafbinfrastructureeis.com/application/files/1116/1763/7031/AAFB_Infra_EIS_Scoping_Brochure.pdf

84 The details of those agreements would very likely not be available to the public.

Evaluating Guam Posture Resiliency

Guam is a U.S. territory and plays a critical role in U.S. strategy in the Western Pacific, thus requiring more effective protection.⁸⁵ Notably, the defense of Guam is one of INDOPACOM's highest priorities and remains the top Pacific Deterrence Initiative (PDI) funding priority.⁸⁶

Nevertheless, there appears to be a significant mismatch between this stated priority and Guam's limited posture resilience efforts to increase the survivability of forces stationed there. The lack of consistent hardening of AAFB infrastructure, the deployment of only one THAAD battery, and infrequent bomber deployments with the termination of Continuous Bomber Presence indicate that posture resilience on the island is severely constrained.

Similar to Okinawa, efforts to generate counterstrike capabilities for Guam have largely been limited by the lack of permanently stationed, forward deployed air assets at AAFB. Most of the available units on Guam focus on ISR, logistical or mobility missions, while bombers that transit to AAFB on dynamic force employment missions are primarily based in CONUS. Although the decision to permanently move an RSAF fighter detachment to AAFB is not finalized, there are still broader questions regarding a concrete timeline for its arrival as well as its ability or authorization to operate alongside U.S. forces and conduct DCA or counterstrike missions. It also appears as if there are no permanently based U.S. tactical aircraft (or plans for such) that could carry out either defensive or offensive counter-air missions, leaving Guam with very little power projection, counterstrike, DCA, or OCA capability. Guam's resiliency posture, exacerbated by the lack of permanently stationed counterstrike assets on the island, negates the island's status as a hub of power projection and a bastion against PLA strikes.

85 "An Interactive Look at the U.S.-China Military Scorecard," *RAND Project Air Force*, <https://www.rand.org/paf/projects/us-china-scorecard.html>

86 "INDOPACOM Report on Pacific Deterrence Initiative Investment Plan," *Inside Defense*, March 2, 2021, <https://insidedefense.com/document/indopacom-report-pacific-deterrence-initiative-investment-plan>

CHAPTER 4

Conclusion and Recommendations

From a strategic perspective, the threats and conditions in the Pacific have dramatically changed over the last twenty years, particularly in the previous decade.⁸⁷ The threats that the United States, Japan, and other partners in the Pacific AOR already face from the PLA will likely continue to into the next two decades. These threats pose a growing challenge as the PLA expands in numbers, capability, complexity, and range. As observers watch the quickening pace of PLA's military buildup and its aggressive actions in the Indo-Pacific, there is growing concern that China will reach a position of confidence from which it could undertake an invasion of Taiwan sometime over the next decade.⁸⁸

Nevertheless, the United States has only made small, incremental changes to its force posture and overall posture resiliency, despite the shift in the military balance in the region, undermining preparations for a future conflict. Multiple administrations across both parties have pledged to commit additional resources to the theater and readjust global posture in accordance with greater prioritization of the Indo-Pacific. Despite this bipartisan consensus, efforts have materialized very slowly, if at all. Notably, the increasing vulnerability of the current force posture and poor posture resiliency has increased the possibility of a fait accompli due to the vulnerability of forward air force.

Over the last several years, intelligence indicates that the PLA is rehearsing strikes on U.S. and allied military installations across the Indo-Pacific, as evidenced by the PLA's construction of mock facilities to replicate Kadena AB, AAFB, and other locations as practice targets. PLA capabilities such as ground-based missiles, intermediate-range missiles, and

87 P.W. Singer and Ma Xiu, "China's Missile Force is Growing at an Unprecedented Rate," *Popular Science*, February 25, 2020, <https://www.popsci.com/story/blog-eastern-arsenal/china-missile-force-growing/>

88 Mallory Shelborne, USNI News Davidson: China Could Try to Take Control of Taiwan in 'Next Six Years', March 9, 2021 <https://news.usni.org/2021/03/09/davidson-china-could-try-to-take-control-of-taiwan-in-next-six-years>

air-launched cruise missiles can render these bases non-operational for long periods by destroying or damaging U.S. air platforms and the infrastructure, supplies, and logistics they depend on.⁸⁹ It is clear that if China is focused on a limited number of targets, it can overwhelm almost any location on the First Island Chain and likely keep it non-operational for extended periods.

Some experts believe that INDOPACOM should posture forces in ways that broadly deter aggression, limiting U.S. allies' and partners' vulnerabilities to a surprise attack or preemption.⁹⁰ Certain types of force structure can play a critical role in crisis management or crisis stability scenarios. Despite the logic behind these arguments, current U.S. military posture toward China may actually fuel crisis instability because most of the capabilities are not suited to either mitigate or deny a fait accompli.⁹¹ The lack of a credible and capable forward presence means that any crisis would force Washington to surge forces from outside the theater, which would meet stiff opposition from a variety of PLA counter-intervention plans.

As Michael Beckley noted in June 2021, “historically, the United States has revamped its military only after enemies have exposed its weaknesses on the battlefield. The country may once again be headed for such a disaster.”⁹² As the possibility of conflicts in the Taiwan Strait, East China Sea, and South China Sea increases over time, Washington faces the threat of a preemptive PLA strike on U.S. forces in the Indo-Pacific.⁹³ The current strategic situation requires leaders to prepare now instead of following the American strategic norm of reacting after an attack. Force posture and posture resiliency calls for bold leadership from DoD to implement and accelerate meaningful options now and in the near term to enhance crisis and structural stability.⁹⁴ U.S. posture and presence are necessary to assure U.S. allies and partners, deter adversaries, focus on operational plan execution, and improve warfighting effectiveness. DoD, INDOPACOM, and the services must act, as air forces in the Pacific cannot afford to wait any longer.

89 For more information on these threats, see Thomas Shugart and Javier Gonzalez, *First Strike: China's Missile Threat to U.S. Bases in Asia* (Washington, DC: Center for a New American Security, June 2017), <https://s3.amazonaws.com/files.cnas.org/documents/CNASReport-FirstStrike-Final.pdf>

90 For an example of this type of analysis, see Mackenzie Eaglen and John Ferrari, “Conventional Deterrence and Taiwan's Independence: Necessary Investments,” *Aether: A Journal of Strategic Airpower and Spacepower* 1, no. 2 (Summer 2022): pp. 29-42. https://www.airuniversity.af.edu/Portals/10/AEtherJournal/Journals/Volume-1_Issue-2/Eaglen-Ferrari.pdf

91 This has parallels to the U.S. Navy posture in the Pacific prior to conflict with Japan. For example, see *On the Treadmill to Pearl Harbor: The Memoirs of Admiral James O. Richardson, USN (Retired) as told to Vice Admiral George C. Dyer, USN (Retired)*, 2010.

92 Michael Beckley, “America is Not Ready for a War with China,” *Foreign Affairs*, June 10, 2021, <https://www.foreignaffairs.com/articles/united-states/2021-06-10/america-not-ready-war-china>

93 Oriana Skylar Mastro, “The Taiwan Temptation: Why Beijing Might Resort to Force,” *Foreign Affairs* 100, no. 4 (July/August 2021), p. 64.

94 Forrest E. Morgan, *Crisis Stability and Long Range Strike: A Comparative Analysis of Fighters, Bombers, and Missiles* (Santa Monica, CA: RAND Corporation, 2013), pp. xiv-xv. <https://www.rand.org/pubs/monographs/MG1258.html>

What Should Be Done for Future Force Posture in This Decade?

The following section summarizes possible force posture options that DoD, INDOPACOM, and the respective services should consider with respect to the Air Force, specifically relating to Okinawa and Guam. By default, the United States should continue to invest in passive and active defenses for both locations and should partner with Japan for efforts pertaining to Okinawa. These efforts include an OCONUS BRAC study, MILCON reform to ensure the establishment of more hardened infrastructure, and deployment of additional active defenses (with additional details on these non-posture measures in Appendix I). However, these measures should also be accompanied by a greater focus on potential posture options (including counterstrike) for Guam and Okinawa, which are outlined below.

Future Posture Options for Okinawa

Kadena AB is situated in a potential combat zone without much posture resilience. However, with a properly adjusted force structure, Kadena could constitute a more reasonable base to stay and fight.⁹⁵ The U.S. should work with Japan to develop Japanese Air Self Defense Force (JASDF) posture resiliency initiatives that are synchronized with Kadena posture activities, with a possible Permanent Combined Joint Task Force (PCJTF) to ensure readiness for near-term conflicts and threats for Okinawa and the southern Islands of Japan.

The proposed options will achieve a net footprint reduction but with more posture resiliency. The new force structure would dramatically reduce the requirements and cost of posture resiliency and be a much more potent and resilient force (see Table 1).

Fighters. The 54 F-15C aircraft at Kadena AB that are scheduled for removal could be replaced with F-15EX aircraft as soon as possible, with approximately six F-15EXs by 2025 and over 24 aircraft by 2030. The F-15EXs would not replace F-15C/Ds one-for-one. There will be a net fighter force structure reduction of about 50% at Kadena. However, the F-15EX could partner with various kinds of UAS, such as attritable/reusable UAS that incorporate manned-unmanned teaming (MUM-T) such as MQ-28 Ghost Bats, which are runway dependent, or the runway-independent MQ-58A Valkyrie, or other similar systems.⁹⁶ These F-15EX aircraft, combined with MUM-T UAS, would focus on Defensive Counter Air (DCA) and offensive counter-air (OCA) attack operations (or in Japan's nomenclature, counterstrike

95 It would be very unlikely that any large aircraft operations could continue at Kadena AB under most attack scenarios.

96 Meredith Roaten, "Just In: Commander Wants New F-15EX Jet Fighter for Indo-Pacific Ops," *National Defense*, March 14, 2022, <https://www.nationaldefensemagazine.org/articles/2022/3/14/pacific-air-forces-commander-calls-for-next-gen-fighter-jets-early-warning-acquisition>

operations).⁹⁷ The F-15 operations and support squadrons that would no longer have aircraft would focus on the MUM-T UAS and independent Low-Cost Attributable Aircraft Technology (LCAAT) UAS in support of the F-15EX.⁹⁸

Munitions. These F-15EX aircraft could be equipped with an array of different munitions to be able to conduct DCA and OCA operations. These include:

1. Long-range anti-ship missiles (LRASMs) and joint air-to-surface standoff missiles – extended range/extreme range (JASSM-ERs/XRs) to strike both maritime and land targets from long distances.
2. Hypersonic munitions such as air-breathing cruise missiles, most notably the Hypersonic Attack Cruise Missile (HACM), could also support the F-15EXs’ standoff strikes against land targets.⁹⁹
3. Air-to-air missiles (AAMs) including the new AIM-260 and Long Range Engagement Weapons (LREW). LREW are especially attractive as air-to-air missiles that could provide counterstrike (long-range DCA) capabilities by putting PLA High-Value Aircraft Assets (HVAA) inside Chinese territory at risk.¹⁰⁰

MQ-9 (Reaper) Orbits. The USAF and USMC should establish MQ-9 orbits with Reaper detachments in Okinawa and the vicinity for air tasking orders (ATOs) in cruise missile defense, airborne early warning, maritime surveillance/sanitization, and ISR support. Recent advancements in MQ-9 capabilities have enabled the Reaper to be highly agile, with only limited maintenance personnel, aircrew, and mobility requirements for Forward Armament and Refueling Point (FARP) operations or Reaper ACE (RACE).

97 David Axe, “U.S. Air Force F-15EXs Flying from Okinawa Could Fire Hypersonic Missiles at Targets 2,000 Miles Away,” *Forbes*, July 19, 2020, <https://www.forbes.com/sites/davidaxe/2020/07/19/us-air-force-f-15exs-flying-from-okinawa-could-fire-hypersonic-missiles-at-targets-2000-miles-away/?sh=6811600625a0>; Joint Chiefs of Staff, “Joint Publication 3-01: Countering Air and Missile Threats,” April 21, 2017, pp. I-10, available at https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_01.pdf; For more information on counterstrike in the Japanese context, see Ryo Nemoto, “Japan’s Ruling Party Calls for Counterstrike Capabilities,” *Nikkei Asia*, April 22, 2022, <https://asia.nikkei.com/Politics/Japan-s-ruling-party-calls-for-counterstrike-capabilities>

98 LCAAT UAS can operate alongside the F-15EX in a manned-unmanned teaming arrangement and fly independently on their own as well.

99 For more information about the F-15EX’s ability to carry hypersonic weapons, see Joseph Trevithick, “F-15EX’s Future Role As A Hypersonic Missile Truck Touted Officially By The Air Force,” *The Drive*, March 11, 2021, <https://www.thedrive.com/the-war-zone/39718/f-15exs-future-role-as-hypersonic-missile-truck-touted-officially-by-the-air-force> and John Keller, “Raytheon, Northrop Grumman to Build Air Force scramjet-powered Hypersonic Cruise Missiles for Combat Jets,” *Military Aerospace Electronics*, September 26, 2022, <https://www.militaryaerospace.com/sensors/article/14283258/hypersonic-scamjet-cruise-missiles>

100 Thomas Newdick, “The Air Force Plans to Test-Launch A Mysterious New Air-To-Air Missile,” *The War Zone*, April 4, 2022, <https://www.thedrive.com/the-war-zone/45057/the-air-force-plans-to-test-launch-a-mystery-new-air-to-air-missile>

Low-Cost Attritable Aircraft Technology (LCAAT) UAS. LCAAT UAS come in various forms on a continuum of attritable to reusable and runway-dependent or independent versions. These LCAAT UAS could be dispersed throughout Okinawa and surrounding smaller islands and be launched in areas smaller than a football field and recovered and reconstituted with relatively quick turns. These UAS would come in various sizes (Class 4, 3, and 2) and are capable of multiple missions such as electronic warfare (EW), electronic attack (EA), DCA, OCA, and support functions. Unlike modern-day aircraft, these UAS can be produced in mass relatively quickly.¹⁰¹ Importantly, LCAATs UAS have much smaller logistics requirements compared to manned aircraft.¹⁰² Several detachments of UAS launch and recovery teams and maintenance and support personnel would be based in Okinawa to disperse, operate, and sustain operations for various scenarios.

Large Aircraft: KC-135Rs, E-3Bs, and RC-135s. In many attack scenarios, the large aircraft force structure (non-fighters) is too large to protect, support, sustain and reconstitute in Okinawa. Therefore, the permanently based E-3Bs, KC-135Rs, and RC-135s should transition to a rotation-based force structure plan in Okinawa. That means that the force structure could reside there day-to-day. However, much of its support should be located at a base or bases where the threat is less severe, and there is adequate posture resilience for these large aircraft and associated support.

Special Ops MC-130s. Air Force Special Operations Command (AFSOC) has specialized capabilities critical across the spectrum of conflict. However, one or more of the specialized capabilities should be resident in Okinawa that would help with power projection, counterstrike, and other capabilities while being posture resilient. One capability would be Operation Red Dragon which launches palletized munitions.¹⁰³ Another possible capability is the launch and recovery of scores of UAS like the Defense Advanced Research Project Agency's (DARPA) Gremlins program.

101 Sara Sirota, "AFRL plans new round of low-cost attritable aircraft testing", *Inside Defense*, February 23, 2021, <https://insidedefense.com/insider/afrl-plans-new-round-low-cost-attributable-aircraft-testing>

102 Thomas Hamilton and David Ochmanek, *Operating Low-Cost, Reusable Unmanned Aerial Vehicles in Contested Environments* (Santa Monica, CA: RAND Corporation, 2020), p. viii, https://www.rand.org/pubs/research_reports/RR4407.html

103 For more information on this capability, see Air Force Research Laboratory, *Rapid Dragon*, <https://afresearchlab.com/technology/rapid-dragon>

Table 1 below outlines recommended force posture changes for Okinawa.

TABLE 1: RECOMMENDED POSTURE CHANGES FOR OKINAWA

Kadena AB	Current	Immediate	2025	2030
F-15C/Ds	54	48	36	0
F-15EX + MUMT	0	6	12	24+/*
MQ-9 w/sUAS USAF & USMC	0 Orbits	1 Orbit	4 Orbits	6 Orbits
LCAAT UAS ¹⁰⁴ Class 4	0	25	100	500
Class 2/3 USAF & USMC	0	50	200	1000
E-3B/Cs to E-7s	2	2	2 TDY	2 TDY E-7s
RC-135s	3	3	1-3 TDY	1-3 TDY
KC-135Rs	15	15	6-12 TDY	6-12 TDY
MC-130s w/sUAS and Palletized Munitions	10 w/o UAS & Munitions	10 w/o UAS & Munitions	10 with UAS or Munitions	10 with UAS & Munitions

Note: Aircraft are TAI unless otherwise stated. *48 F-15EX Combat Coded aircraft would be in the Pacific AOR at various locations. That number could vary depending on other force structure options pursued.

Future Posture Options for Guam

This location may be one of the most critical strategic anchors in the Indo-Pacific region for the U.S. Air Force and land-based air power for the Navy and the USMC. AAFB needs to be a strategic base with well-developed plans not just for peacetime operations but also for the continuum of conflict, including gray zone activities and high-intensity warfare. Changes to force posture in Guam should enhance crisis stability and complicate adversaries’ targeting.

The primary focus of the Guam posture options would include a dramatic increase in long-range power projection capabilities bolstered by robust posture resilience measures. The central theme would be the implementation of the recommendations made by several significant studies in 2004, 2006 et al. for an ISR/Strike (Guam Strike) capability to be permanently based at AAFB. Since 2004, the Air Force and the Office of the Secretary of Defense (OSD) have been exploring a variety of possible power projection options, but the initiative has yet to be implemented effectively over time. The RSAF detachment is an option that meets some of the original Guam Strike goals. Still, with uncertainty about

104 The projected numbers of LCAATs are a reasonable estimate and clearly fit within the original vision of the 3rd Offset and AFRL. Subsequent research, design, tests and analysis of additive manufacturing and other techniques have provided higher confidence levels that this is achievable. However, decisions would have to be made over the next 12-18 months (as of 2022) s by DoD and the Air Force to realize these numbers.

this unit's ability to operate alongside the United States during a crisis and the DPRI finishing the majority of its projects, there is an opportunity to focus on additional force structure posture.¹⁰⁵

(Permanent) Bomber Detachment or Squadron. The USAF, with INDOPACOM support, should immediately stand up a bomber detachment or squadron consisting of B-52s, B-1Bs, or a combination of these aircraft. If a permanent detachment or squadron is not feasible for the time being, a continuous rotational detachment should be re-established at AAFB until a more permanent detachment or squadron is feasible. This detachment would provide options for a strip alert, with a variety of loadouts: LRASMs, JASSM-ERs/XRs, hypersonic munitions, aerial mines, and other precision-guided munitions (PGMs). This B-52/B-1B detachment would fill in the long-range strike role and pave the way for the transition of some B-21s to Guam as soon as possible. Meanwhile, DoD should develop specially designed, hardened shelters for the B-21 that could also support future penetrating ISR aircraft (P-ISR), the next-generation air dominance (NGAD) program, and other platforms.¹⁰⁶

RSAF Fighter Detachment. If the United States decides to maintain the RSAF presence at AAFB, it could base the Singaporean aircraft at another site within the base other than the west end of the North Ramp. Alternatively, the U.S. could also try to base these aircraft at another installation in the theater. In both cases, INDOPACOM and DoD would have to conduct further studies and assessments to determine the placement of RSAF aircraft.

Air Force Fighter Squadron(s). Instead of basing all of the future F-15EXs at Kadena, the Air Force should distribute these fighter aircraft and others (e.g., F-35A and NGAD) across the Indo-Pacific at AAFB and other locations. The USAF future fighter force structure will consist of the "4+1" concept, which means that the number of fighter platforms will go from seven to around four: the A-10, NGAD, F-35A, F-15EX, and F-16.¹⁰⁷

105 The author (Rehberg) reached this conclusion by reviewing the original MILCON projects and analyzing MILCON funding over the last several years. See Major Nick Oltman, "Strengthening U.S.-Japanese Posture in INDOPACOM," *Marine Corps Gazette*, August 2021. With much of the Guam construction completed, there is a more optimistic tone regarding this portion of the DPRI.

106 AAFB is in the process of finishing two hardened hangars for large aircraft—tankers and bombers. The designs of those hangars are close to a decade old. Moreover, those hangars do not have the latest technology nor the latest design ideas that can be specifically tailored for the future force structure. Because of the size and dimensions of the new force structure, engineers could dramatically reduce the cost of new hardened hangars while offering additional hardening protection. The author (Rehberg) has personal knowledge in this area from his previous DAF & HAF position(s) and responsibilities.

107 Gillian Rich, "USAF Chief Outlines F-15EX Buy Decision as Part of Fighter Mix", June 23, 2022, <https://www.janes.com/defence-news/news-detail/usaf-chief-outlines-f-15ex-buy-decision-as-part-of-fighter-mix>

Low-Cost Attritable Aircraft Technology (LCAAT) UAS. The vast majority of LCAATs would operate from or near the first island chain. In addition, Guam could provide a staging base to move LCAATs to different locations in the theater and also reinforce LCAATs in Okinawa. Some LCAAT (class 4) UAS could operate from Guam and recover in the first island chain or other locations.

Penetrating-ISR (P-ISR). Unmanned persistent penetrating ISR (P-ISR) platforms would reduce the joint force's reliance on increasingly vulnerable overhead sensor networks and increase its ability to adapt to the dynamic conditions of the future battlespace. Future P-ISR UAS would help other aircraft and weapons operating in contested airspace receive current information on the disposition of enemy forces, emerging threats, and mobile/relocatable targets.¹⁰⁸ P-ISR, NGAD platforms, and other enablers should be located in hardened aircraft shelters and other facilities on the North Ramp.

KC-46A Tanker Squadron. The current rotational Reserve Component (RC) Tanker Task Force (TTF), located on Guam since 2001, should be replaced with a permanent squadron of 12-18 KC-46A tankers to enhance operational reach and flexibility critical to power projection. Permanent positioning of airborne refueling assets will enhance operational reach and flexibility while reducing risks associated with the regular swap-out of the RC forces and eliminate limits to air refueling support based on funding authorities constraining RC mobilization to support operations in the Western Pacific.

MQ-9 Orbits. USAF and USMC should establish MQ-9 orbits and a logistics hub and staging base to support other MQ-9 orbits in the Indo-Pacific AOR from Guam. Reaper detachments in Guam and the vicinity would be used for tasking in cruise missile defense, airborne early warning, maritime surveillance/sanitization, and ISR support.

¹⁰⁸ Mark Gunzinger, Carl Rehberg, et al., *An Air Force for An Era of Great Power Competition* (Washington, DC: Center for Strategic and Budgetary Assessments, 2019), pp. xv, 95-96, 99-119, 165. The P-ISR was defined and described in this publication. This CSBA study was one of three independent studies on the Air Force's future aircraft inventory directed by the National Defense Authorization Act for Fiscal Year 2018, P.L. 115-91, 131 Stat. 1283 (2017), Section 1064, "Studies on Aircraft Inventories for the Air Force."

Table 2 below outlines recommended force posture changes for Guam.

TABLE 2: RECOMMENDED POSTURE CHANGES FOR GUAM¹⁰⁹

AAFB	Current	Immediate	2025	2030
F-15EXs	0	0	6	12-18
NGAD				6/+6
B-1B/B-52H	*	6	6	6
B-21 ¹¹⁰			3(2028)	6-12
MQ-9+follow-on + Logistics Hub	0 Orbits	1 Orbit	2 Orbits	4 Orbits
AEW&C			1 Orbit	2-3 Orbits
P-ISR				2 Orbits
LCAAT UAS Class 4 Class 2/3 + Logistics Hub	0 0	0 0	25 50	200 400
KC-135Rs/KC-46As	**	**	6/+6	18/+18
USAF RQ-4s// DoN-MQ-4Cs	2//0	2//0	2//2	2//2
DoN-P-8s	0	6 TDY	6-12 TDY	6-12 TDY

*The continuous bomber presence (CBP) no longer exists. However, there are episodic deployments of bombers to Guam and other locations on an ad hoc basis under the Dynamic Force Employment Concept.

** Tankers at Guam (since 2001) are from the rotational Reserve Component (RC) Tanker Task Force (TTF).

Future Posture Recommendations for Both Okinawa and Guam

This report has provided posture options that are realistic and implementable in the near term, specifically the 2020s decade. However, some options have challenges, caveats, and essential assumptions, especially if multiple options are selected. Nevertheless, DoD, INDOPACOM, and others may have different options worthy of consideration and implementation.

DoD, INDOPACOM, and the Services should nominate force posture options immediately for the Pacific Deterrence Initiative (PDI). This report has provided several options that should be implemented now, several over the next few years, and some by 2030.

¹⁰⁹ A detachment of RQ-4s is currently located at AAFB. From the several sources, the Air Force wants RQ-4s retired in the near- to mid-term. They will likely be replaced with P-ISR aircraft, if not, the RQ-4s should stay at AAFB.

¹¹⁰ This is a reasonable estimate based on B-21 force structure estimates from Mark Gunzinger, Carl Rehberg, et al. *An Air Force for An Era of Great Power Competition*, p. 138.

Okinawa and Guam’s force posture must focus on credible deterrence and combat—not peacetime. These locations are critical bases in the Pacific AOR for the Air Force and land-based air for the Navy and USMC air. Okinawa and Guam need to be strategic bases with well-thought-out force structure posture and resiliency plans that make a difference for credible deterrence, including operational, contingency, and crisis plans. However, a combat mentality for U.S. air forces in the Indo-Pacific, with a “Fight Tonight” or a “Defend Tonight” mindset, should be re-instilled as quickly as possible. The current U.S. transition to contingency or crisis takes too long. Prioritization should not lie with peacetime operations (including some exercises) but rather with planning and training for contingencies and crises. In addition, the “Fight Tonight” and a “Defend Tonight” mindsets must also see substantive changes for the U.S.-Japan Alliance and other allies and partners in the region. There should be synergistic and complementary force posture changes and resiliency actions, including counterstrike, beginning with Japan.¹¹¹

Non-Force Structure Additional Recommendations

While the analysis and recommendations in this report are focused on force structure changes to Pacific air forces posture in the 2020s, there are several additional recommendations that should also be implemented in parallel. These are outlined below.

Establish two permanent joint task forces (PJTFs) in the Pacific AOR. One way to ensure effective posture resilience is to establish two permanent or standing combined joint task forces (PCJTFs). The two most necessary task forces include: (1) A PCJTF for the defense of Taiwan, the East China Sea, and the South China Sea et al. led by the US—a “Fight Tonight” approach; and (2) A standing PCJTF focusing on the defense of Japan led by Japan—a “Defend Tonight” approach.¹¹²

Support options that accelerate allies’ counterstrike capabilities, starting with Japan. If the Government of Japan (GoJ) decides to proceed with counterstrike capabilities for the JASDF, the USAF and others should move with great alacrity to support them. DoD, INDOPACOM, Pacific Air Forces (PACAF), and the Air Force should support and enable the JASDF to learn and establish a genuinely effects-based targeting process as soon as possible, synergistic force structure (e.g., F-35A Block 4s at Misawa AB), and other options such as a Combined All-Domain Operations Center (CADOC) with a Joint Targeting Center at Yokota AB (or other suitable locations) that would accelerate the JASDF counterstrike capabilities to initial operational capability (IOC). It would also include an upgrade the Bilateral Joint Operations Coordination Center (BJOCC) at Yokota AB into an Alliance

111 Carl Rehberg, Chris Bassler, and Herbert Kemp, “Strengthening Integrated Air and Missile Defense for the Japan-US Alliance,” *The Diplomat*, September 23, 2022, <https://thediplomat.com/2022/09/strengthening-integrated-air-and-missile-defense-for-the-japan-us-alliance/>

112 Ibid.

Combined All-Domain Operations Center (CADOC) that would include a Japan-U.S. Missile Defense Command and Control Center.¹¹³

OCONUS BRAC Study should commence immediately. The 2018 NDS called for a new round of base realignment and closure (BRAC) but did not specify a CONUS or an OCONUS BRAC.¹¹⁴ A case can be made for an OCONUS BRAC that should help spur changes to the location and number of bases, the force posture, and posture resiliency for INDOPACOM and the other combatant and geographic commands. The United States previously conducted this type of overseas basing assessment with the 2004 Commission on Review of Overseas Military Facility Structure of the United States.¹¹⁵ Washington should move to establish a similar commission to carry out this process in the present-day amidst drastic changes in the global threat environment over the past decade, thereby fulfilling a potential OCONUS component of the BRAC specified in the 2018 NDS.

OCONUS MILCON and other processes need significant reform. For more than a decade, critical bases in INDOPACOM have been unable to secure approval for many important MILCON projects. The vast majority of MILCON planning does not adequately consider the severity of the threats, and our adversaries have stymied vital force posture initiatives. Congress should require an NDAA study for new processes (e.g., National Environmental Policy Act, Environmental Impact Statement, Fish & Wildlife) for OCONUS MILCON. This NDAA study should propose new ways to do OCONUS MILCON and fund hardened shelters and other passive defense capabilities outside MILCON funding. It would allow hardened shelters and associated details to be classified and some shelters to be funded with “Other Equipment Procurement” (e.g. Air Force 3080) appropriations with the proper Congressional oversight in lieu of the MILCON rules and procedures. It would also provide more flexibility for allies to fund some of these capabilities for U.S. forces. For example, Japan’s Ministry of Defense (MOD) has funded some USAF aircraft shelters. In the meantime, OCONUS MILCON and force posture decisions should be kept classified as much as possible.

113 Ibid.

114 Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military’s Competitive Edge* (Washington, DC: Department of Defense, January 2018), p. 10, <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>. For additional arguments calling for a BRAC to accompany the 2018 NDS, see Frederico Bartels, “A New Defense Strategy Requires a New Round of BRAC,” *Strategic Studies Quarterly* (Fall 2019): pp. 73-92, https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-13_Issue-3/Bartels.pdf

115 Hon Al Cornella, MG Lewis E. Curtis III, VADM Anthony Less, BG Keith Martin, LTG H.G. Taylor, and Dr. James A. Thomson, *Commission on Review of Overseas Military Facility Structure of the United States*, May 9, 2005, <https://irp.fas.org/agency/dod/obc.pdf>

Enhanced Passive Defenses: Selective Hardening, Aircraft Shelters, and ACE/EABO. Throughout the INDOPACOM, there is a critical need to selectively harden. Hardening is done to protect personnel, aircraft, IAMD assets, equipment, fuel infrastructure, C2, munitions storage, and other resources critical to operating and sustaining bases, ports, and other facilities. Selective hardening and other passive defense improvements are still needed in the Indo-Pacific. As one example, the USAF and USMC have yet to provide any hardened aircraft shelter plans for their fighter aircraft. The United States has yet to offer passive protection plans for its IAMD assets (e.g. hardened shelters for radars and launchers) as well defenses against small UAS. The ACE and EABO programs have had some major successes, but additional focus and targeted funding are needed to continue that progress. In addition, significant ACE/EABO collaboration with critical allies and partners must continue to enhance interoperability and readiness.

LIST OF ACRONYMS

A2/AD	Anti-access and area-denial
AAFB	Andersen Air Force Base
AAM	Air-to-Air Missile
ACE	Agile Combat Employment
AEW	Airborne Early Warning
AFSOC	Air Force Special Operations Command
ALCM	Air Launched Cruise Missile
AOR	Area of Responsibility
ATO	Air Tasking Order
AWACS	Airborne Warning and Control System
BMC3	battle management, command, control, and communications
BMC2	Battle management, command, and control
BRAC	Base Realignment and Closure
BUR	Bottom-Up Review
C2	Command and Control
C3ISR	command, control, communications, intelligence, surveillance, and reconnaissance
CAOC	Combined Air Operations Center
CAPs	combat air patrols
CBP	Continuous Bomber Presence
CCP	Chinese Communist Party
CENTCOM	U.S. Central Command
CHAMP	Counter-electronics High-powered Microwave Advanced Missile Project
CONOPS	Concept of Operations
CONUS	Continental United States
CSBA	Center for Strategic and Budgetary Assessments
C-UAS	Counter Unmanned Aerial Systems
DARPA	Defense Advanced Research Projects Agency
DAS	Distributed Aperture System
DCA	Defensive Counter-air
DMO	Distributed Maritime Operations
DoD	Department of Defense
DPRI	Defense Policy Review Initiative
DSG	Defense Strategic Guidance
EA	Electronic Attack
EABO	Expeditionary Advanced Base Operations
EIS	Environmental Impact Statement
ER	extended range

EW	Electronic Warfare
FARP	Forward Armament and Refueling Point
FRF	Futenma Replacement Facility
FY	fiscal year
GBAD	Ground-Based Air Defense
GDPR	Global Defense Posture Review
GLCM	ground-launched cruise missile
GMD	Ground-Based Midcourse Defense
GoJ	Government of Japan
GPR	Global Posture Review
GPS	Global Positioning System
G-RAMM	guided-rockets, artillery, missiles, and mortars
HALE	high-altitude long endurance
HEL	high energy laser
HELIOS	High Energy Laser and Integrated Optical dazzler with Surveillance
HELLADS	High Energy Liquid Laser Area Defense System
HGV	hypersonic glide vehicle
HiJENKS	High-power Joint Electromagnetic Non-Kinetic Strike
HPM	high power microwave
HVAA	High Value Aircraft Asset
HVP	hyper-velocity projectile
IADS	integrated air defense systems
IAMD	integrated Air and Missile Defense
ICBM	intercontinental ballistic missile
IFPC-	Indirect Fire Protection Capability Increment 2
INDOPACOM	U.S. Indo-Pacific Command
INF Treaty	Intermediate-Range Nuclear Forces Treaty
IOC	Initial Operational Capability
IR	infrared
IRBM	intermediate-range ballistic missiles
JASDF	Japan Air Self-Defense Force
JASSM	Joint Air-to-Surface Standoff Munition
JHPSSL	Joint High-Power Solid-State Laser
Km	kilometer
kW	kilowatt
kW/cm²	kilowatts per square centimeter
LACM	land-attack cruise missile
LCAAT	Low-Cost Attritable Aircraft Technology
LPWS	Land-based Phalanx Weapon System

LRASM	Long Range Anti-Ship Missile
LEW	Long Range Engagement Weapon
MCAS	Marine Corps Air Station
MDA	Missile Defense Agency
MENA	Middle East and North Africa
MILCON	Military Construction
MML	Multi-Mission Launcher
MOB	Main Operating Base
MOU	Memorandum of Understanding
MRBM	medium-range ballistic missiles
MSE	Missile Segment Enhancement
MUM-T	Manned-Unmanned Teaming
NASAMS	National Advanced Surface-to-Air Missile System
NATO	North Atlantic Treaty Organization
NDAA	National Defense Authorization Act
NDS	National Defense Strategy
NGAD	Next Generation Air Dominance
NIFC-CA	Naval Integrated Fire Control-Counter Air
Nm	nautical mile
NSS	National Security Strategy
O&S	operations and support
OCA	Offensive Counter-air
OCONUS	Outside the Continental United States
OCPFH	operational cost per flying hour
OSD	Office of the Secretary of Defense
PAC	Patriot Advanced Capability
PACAF	Pacific Air Forces
PDI	Pacific Deterrence Initiative
PGM	Precision Guided Munition
P-ISR	Penetrating Intelligence, Surveillance, and Reconnaissance
PJCTF	Permanent Joint Combined Task Force
P_k	probability of kill
PLA	People's Liberation Army
PLAAF	People's Liberation Army Air Force
PLARF	People's Liberation Army Rocket Forces
QDR	Quadrennial Defense Review
RACE	Reaper Agile Combat Employment
RADR	Rapid Airfield Damage Repair
RC	Reserve Component

RHEL	Ruggedized High Energy Laser
RSAF	Republic of Singapore Air Force
SAM	surface-to-air missile
SHIELD	Self-Protect High Energy Laser Demonstrator
SHORAD	short-range air defense
SRBM	short-range ballistic missiles
SSL	solid-state lasers
SSL-TM	Solid-State Laser Technology Maturation
THAAD	Terminal High Altitude Air Defense
TTF	Tanker Task Force
UAS	unmanned aerial system
UCAV	unmanned combat air vehicles
USAF	United States Air Force
USFJ	United States Forces Japan
USMC	United States Marine Corps
USN	United States Navy



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